under it, while at the same time reducing charges to small users. The proposed amendments would also specify charges for initial transcripts of Bank Board meetings.

Of the three public comments received on the proposal, two respondents found the proposed charges and fees reasonable, but made additional comments outside the scope of these amendments. The third respondent urged that transcripts of Bank Board meetings be provided at 10 cents per page rather than $3.00 per page, as proposed.

The $3.00 charge represents the actual cost of transcribing material from tape recordings. Material which has been previously transcribed is provided at 10 cents per page, with provision for waiver of charges under $3.00. The Bank Board believes such charges are fair and consistent with the purposes of these amendments. However, the Bank Board has directed that waiver of the $3.00 fee under § 505.4(e)(5) be considered with respect to each request for a transcript and that the appropriateness of the fee be reviewed on a quarterly basis.

Accordingly, the Bank Board hereby amends § 505.4 by revising subsection (e) thereof to read as follows:

§ 505.4 Access to records.

* * * * *

(e) *Fees for providing copies of records.*—(1) *Statistical and financial reports of individual institutions (including unpublished aggregrates of these reports).* (i) The charges for copies of such reports are as follows:

For printed copy: Search charge of $2.00 per specific report requested (regardless of number of institutions for which data are requested) plus 30 cents a page copy charge.

For magnetic tape containing all individual institution information for a single period for a specific report:

$50.00 for Format #1 (Board's internal format, 800 or 1600 BPI, odd parity, 9 track, no label or tape mark; data recorded in Sixbit imbedded Comp.)

$150.00 for Format #2 (Universal EBCDIC, 800 or 1600 BPI, odd parity, 9 track, no label or tape mark; data recorded in EBCDIC.)

(ii) Procedure. Address all requests for statistical or financial records to: Office of Economic Research (Attention: Information Disclosure Section), Federal Home Loan Bank Board, 1700 G Street, N.W., Washington, D.C. 20552. Include requester's name, address, and telephone number. If requesting data for an individual institution, provide its accurate and complete name and home office address and dates for specific data requested. For geographical requests, specify county and/or state in which the institutions or offices are located as well as dates for specific data requested. Requesters will be billed for copies. No advance payment will be accepted.

(2) *Other computer or information system records.* With respect to information obtainable only by processing through an information systems program, which has been made available under paragraph (a) of this section, a person requesting such information shall pay a fee equal to the full cost of retrieval and production of the information requested and the Director, Office of Economic Research, or his designee is authorized to determine the cost of such retrieval and production upon recommendation, where appropriate, of the Director, Information Systems Division, or his designee.

(3) *Transcripts of Bank Board meetings.* The charge for initial transcripts of Bank Board meetings shall be $3.00 per page or part thereof. This charge shall apply to all meetings open pursuant to 5 U.S.C. 552b(c) and to those portions of closed meetings which are publicly available pursuant to 5 U.S.C. 552b(f)(2).

(4) *All other records.* A person requesting access to or copies of particular records shall pay the cost of searching or copying such records at the rate of $10 per hour for searching and 10 cents per page for copying. Unless a requester states in his initial request that he will pay all costs regardless of amount, he shall be notified as soon as possible if there is reason to believe that the cost for obtaining access to and/or copies of such records will exceed $50. If such notice is given, the time limitations contained elsewhere in this Part shall not commence until the requester agrees in writing to pay such cost. The Secretary is authorized to require an advance deposit whenever in his judgment such a deposit is necessary to insure that the Board will receive adequate reimbursement of its costs. If such a deposit is required, the time limitations contained elsewhere in this part shall not commence until the deposit is paid.

(5) *Waiver of charges.* The Secretary or his designee or, where appropriate, the Director, Office of Economic Research, or his designee is authorized either to waive payment of charges under this section in instances in which total charges are less than $3.00 or to waive in full or in part such charges when unnecessary hardship would be inflicted upon the requesting person or when waiver would serve the public interest.

(Pub. L. 93-502 (5 U.S.C.552); Secs. 11, 17, 47 Stat. 733, 736, as amended; secs. 5, 402, 48 Stat. 132, 1256, as amended (12 U.S.C. 1431, 1437, 1464, 1725). Reorg. Plan No. 3 of 1947, 12 FR 4981, 3 CFR, 1943-48 Comp., p. 1071.)

By the Federal Home Loan Bank Board.

J. J. FINN,
Secretary.

[FR Doc. 79-9215 Filed 3-26-79; 8:45 am]

[6320-01-M]

Title 14—Aeronautics and Space

CHAPTER II—CIVIL AERONAUTICS BOARD

SUBCHAPTER A—ECONOMIC REGULATIONS

[Reg. ER-1111; Amdt. No. 65]

PART 288—EXEMPTION OF AIR CARRIERS FOR MILITARY TRANSPORTATION

Fuel Surcharge Rate

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., March 21, 1979.

AGENCY: Civil Aeronautics Board.

ACTION: Final Rule.

SUMMARY: This final rule establishes a 1.40 percent fuel surcharge rate applicable to the minimum military charter rates (ER-1045, December 27, 1977) for foreign and overseas air transportation services performed for the Department of Defense (DOD) and procured by the Military Airlift Command (MAC). This surcharge amendment is triggered by an increase in the average fuel price for the participating MAC carriers of 2.34 cents per gallon—from 41.31 cents per gallon to 43.65 cents per gallon.

DATES: Adopted: March 21, 1979. Effective: March 21, 1979.

FOR FURTHER INFORMATION CONTACT:

James E. Gardner, Domestic Fares and Rates Division, Bureau of Pricing and Domestic Aviation, Civil Aeronautics Board, 1825 Connecticut Avenue, N.W., Washington, D.C. 20428, Phone: 202-673-5364.

SUPPLEMENTAL INFORMATION: As indicated in ER-1024 (42 FR 58902, November 11, 1977), dated November 3, 1977, the Board monitors fuel price changes and will establish a fuel surcharge rate adjustment when the average price of fuel for participating MAC carriers changes one cent or more per gallon. ER-1088, effective December 21, 1978, established a fuel surcharge of 0.37 percent based on October 1978 data.

The Board has completed its review of the latest available fuel cost data as reported on C.A.B. Form 41, Schedule P-12(a) for foreign and overseas MAC air transportation services for the month of January 1979, and is estab-

lishing surcharge provisions in Part 288 of its Economic Regulations (14 CFR Part 288) applicable to the rates established for those services.[1] The basis for issuing this surcharge amendment is the increase in average fuel price for the participating MAC carriers of 2.34 cents per gallon—from 41.31 cents per gallon reflected in the currently effective base rates to the latest reported average price of 43.65 cents per gallon.

The attached Appendix sets forth the results of the surcharge rate computation for the reported fuel price changes for commercial and military fuels consumed in military charter service for the month of January 1979, and the rate impact of the changes in current average fuel prices from those reflected in the base rates. Accordingly, we will establish the fuel surcharge rate applicable to the current base final rates, effective March 21, 1979 to increase the Category B and Category A rates by 1.40 percent.

In view of the present need for a fuel surcharge to the minimum rates set forth in Part 288, we find good cause exists to make these amendments effective on less than thirty (30) days' notice.

In consideration of the foregoing, the Board amends Part 288 of its Economic Regulations (14 CFR Part 288) effective March 21, 1979 as follows:

1. Amend § 288.7(a) by amending the paragraph following the tables so as to reflect an additional proviso, the amended paragraph to read as follows:

§ 288.7 Reasonable level of compsensation.

* * * * *

(a) * * *
(1) * * *
(2) * * *

* * * * *

Provided, That subject to the provisions of § 288.8, the minimum rates set forth above shall not be applicable to passengers or cargo carried on a particular trip in excess of the amount that the contract calls for DOD to supply and the carrier to provide space: *And provided further,* That if a carrier performs a one-way charter flight carrying nonmilitary traffic for a nonmilitary user, the carrier may charter the return flight of that aircraft to DOD at a published one-way charter traffic rate that is in fact available to the general public for equivalent services: *Provided, however,* That effective March 21, 1979 the total minimum conpensation pursuant to the rates set forth in subparagraph (1) above for services performed with regular jet, wide-bodied jet and DC-8-61/63 aircraft shall be increased by a surcharge of 1.40 percent.

2. Amend § 288.7(d) (1) and (2) to add a proviso and to read as follows:

§ 288.7 Reasonable level of compensation.

* * * * *

(d) * * *
(1) * * *
(2) * * *

Provided, That effective March 21, 1979 the total minimum compensation pursuant to the rates specified in subparagraphs (1) and (2) of this paragraph shall be increased by a surcharge of 1.40 percent.

* * * * *

(Secs. 204, 403, 416, Federal Aviation Act of 1958, as amended; 72 Stat. 743, 758 and 771, as amended (49 U.S.C. 1324, 1373 and 1386).)

By the Civil Aeronautics Board.

PHYLLIS T. KAYLOR,[2]
Secretary.

[1] This and future surcharge amendments will be made applicable to the minimum MAC rates established in ER-1045, effective December 27, 1977, until such time as new final base rates are established.

[2] All Members concurred.

MAC LONG-RANGE CARRIERS
Computation of Fuel Surcharge Based on
January 1979 P-12(a) Fuel Data Reports

Carrier	January 1979 P-12(a) Data: Cost	Gallons	Avg. Cost Per Gallon	Price Per Gallon Used in Latest Surcharge Computation 1/	Currently Effective Base Average Price 2/	Percent Price Increase (Decrease) Current/Base	Fuel Cost as a Percent of Total Economic Cost 3/	Fuel Price Change Impact on Base Economic Costs	Rate Impact Weighting Factor 4/	Base Rate Impact For Fuel Price Change
Airlift	$ 475,533	1,046,718	45.43¢	42.69¢	45.68¢	(0.55)%	37.25%	(0.20)%	4.38%	(0.009)%
Capitol	70,111	162,124	43.25	42.51	38.96	11.01	32.36	3.56	1.49	0.053
Flying Tiger	869,447	2,051,874	42.37	42.60	40.32	5.08	27.81	1.41	18.91	0.267
Northwest	91,969	215,561	42.66	41.96	40.69	4.84	29.34	1.42	16.82	0.239
Pan American	10,612	23,148	45.84	42.00	41.21	11.24	24.27	2.73	25.95	0.708
Seaboard	235,751	542,486	43.46	42.04	45.98	(5.48)	32.23	(1.77)	9.81	(0.174)
Trans Int'l.	572,715	1,340,132	42.74	42.46	40.65	5.14	30.01	1.54	13.07	0.201
World	1,168,152	2,622,806	44.54	42.23	42.83	3.99	29.50	1.18	9.57	0.113
Totals	$3,494,290	8,004,849	43.65¢	42.39¢	41.31¢		28.51%		100.00%	1.398%

1/ ER-1088, Appendix A.
2/ Average per gallon fuel costs used in determing currently effective base rates (ER-1045) as set out in ER-1024.
3/ ER-1088, Appendix B.
4/ ER-1088, Appendix D.

[FR Doc. 79-9214 Filed 3-26-79; 8:45 am]

[6351-01-M]

Title 17—Commodity and Securities Exchanges

CHAPTER I—COMMODITY FUTURES TRADING COMMISSION

PART 15—REPORTS—GENERAL PROVISIONS

Adoption of Amendments to the Reporting Requirements

AGENCY: Commodity Futures Trading Commission.

ACTION: Final rule.

SUMMARY: The Commodity Futures Trading Commission ("the Commission") has found that the growth in trading volume, open interest, and account size of individual traders in certain markets enables the Commission to carry out its market surveillance program with fewer reports from futures commission merchants, foreign brokers and traders.

Accordingly, as part of its ongoing efforts to eliminate any unnecessary reporting requirements, the Commission has adopted amendments to its reporting regulations under the Commodity Exchange Act, as amended ("Act"), to raise the position levels in certain commodities at which series '03 reports and Form 40's must be filed by traders and series '01 reports and Form 102's must be filed by futures commission merchants ("FCM's") and foreign brokers.

The intended effect of this action is to alleviate an unnecessary reporting burden on the public and to reduce the amount of paperwork processed by the Commission.

EFFECTIVE DATE: April 1, 1979.

FOR FURTHER INFORMATION CONTACT: Wayne L. Olson, Division of Economics and Education, Commodity Futures Trading Commission, 2033 K Street, N.W., Washington, D.C., 20581, Telephone (202) 254-3312.

SUPPLEMENTARY INFORMATION: Reporting levels are set in various commodities to ensure that the Commission receives adequate information to carry out its market surveillance programs, which include detection and prevention of market congestion and price manipulation and enforcement of speculative limits. [1] Generally, Parts 17 and 18 of the Regulations require reports from FCM's or foreign brokers and traders respectively when a trader holds a "reportable position," i.e., the open positions held or controlled by the trader at the close of business in any one future of a commodity traded on any one contract market equal or exceed the quantities fixed by the Commission in § 15.03(a) of the Regulations.

Traders who attain a "reportable position" are required to report on a series '03 report all positions the trader owns or controls as well as trades and deliveries in the subject commodity. In addition, the trader must file a Form 40 giving certain biographical information. FCM's and foreign brokers who carry accounts in which there are "reportable positions" of traders are required to identify such traders on a Form 102 and report on the series '01 forms, positions carried for each trader that equal or exceed the reporting level in any commodity.

The Commission has determined that the growth in trading volume, open interest, and account sizes of individual traders in certain markets enables the Commission to maintain effective surveillance of those markets with fewer reports from FCM's, foreign brokers and traders public. Accordingly, as part of its ongoing efforts to eliminate any unnecessary reporting requirements, the Commission has determined that reporting levels should be raised for the following commodities: in soybean meal, soybean oil, gold bullion, copper and live cattle from 50 contracts to 100 contracts; in silver bullion, from 100 contracts to 250 contracts. Reporting levels in all other commodities are not changed. In selecting the new levels, the Commission has considered that it receives information for surveillance purposes on both the series '01 and '03 reports. If, at a later date, the Commission eliminates series '03 reports as it is considering (see e.g., 41 FR 30350 (July 23, 1976); 42 FR 62147 (December 9, 1977); 43 FR 60146 (December 26, 1978)), the Commission may find it necessary to reconsider the reporting levels for some commodities to ensure that it has sufficient data for the operation of an effective market surveillance program. Reporting levels at which merchants, processors, dealers and traders with bona fide hedging positions as defined in § 1.3(z), 17 CFR § 1.3(z) (1978), in certain commodities must file series '04 reports are unaffected by these amendments (see Regulation 15.03(b), 17 CFR § 15.03(b) (1978), as amended, 43 FR 45828-29 (October 4, 1978)).

In consideration of the foregoing, the Commission, pursuant to its authority under sections 4g(1), 4i, and 8a(5) of the Act, 7 U.S.C. 6g(1), 6i and 12a(5) (1976), hereby amends Part 15 of Chapter I of Title 17 of the Code of Federal Regulations by revising § 15.03(a) as follows:

§ 15.03 Quantities fixed for reporting.

(a) The quantities fixed for the purpose of reports filed under Parts 17 and 18 of this Chapter are as follows:

Commodity:	
Wheat (bushels)	500,000
Corn (bushels)	500,000
Soybeans (bushels)	500,000
Oats (bushels)	200,000
Rye (bushels)	200,000
Barley (bushels)	200,000
Flaxseed (bushels)	200,000
Soybean oil (contracts)	100
Soybean meal (contracts)	100
Live cattle (contracts)	100
Sugar (contracts)	50
Copper (contracts)	100
Hogs (contracts)	50
Gold (contracts)	100
Silver bullion (contracts)	250
Silver coins (contracts)	50
Cotton (bales)	5,000
All other commodities (contracts)	25

* * * * *

The foregoing amendment is adopted effective April 1, 1979. The Commission finds that the foregoing action relieves a burden heretofore imposed and therefore, that the notice and other public procedures called for by 5 U.S.C. 553 are not required.

Issued in Washington, D.C., on March 21, 1979, by the Commission.

READ P. DUNN, Jr.,
Commissioner, Commodity Futures Trading Commission.

[FR Doc. 79-9196 Filed 3-26-79; 8:45 am]

[8010-01-M]

CHAPTER II—SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-15028]

PART 200—ORGANIZATION; CONDUCT AND ETHICS; AND INFORMATION AND REQUESTS

Delegation of Authority to Director of Division of Enforcement

AGENCY: Securities and Exchange Commission.

ACTION: Correction.

SUMMARY: This document corrects FR Doc. 78-23116 appearing at page 36621 in the FEDERAL REGISTER of August 18, 1978, by adding the statutory authority pursuant to which the action announced in Securities Exchange Act Release No. 34-15028 was taken. That statutory authority for the addition of paragraph (a)(5) to § 200.30-4 is Pub. L. No. 87-592, 76 Stat. 394 (15 U.S.C. 78d-1, 78d-2).

[1] The following commodities are those for which Commission speculative limits are in effect: wheat, grains (including oats, barley and flaxseed), corn, soybeans, rye, eggs, cotton, and potatoes. 17 CFR Part 150, as amended, 44 FR 7127-8, February 6, 1979.

DATE: March 21, 1979.

FOR FURTHER INFORMATION CONTACT: Michael F. Perlis, Esquire, Assistant Director, Division of Enforcement, Securities and Exchange Commission, Washington, D.C. 20549, (202) 755-1650.

MARCH 21, 1979.

SHIRLEY E. HOLLIS,
Assistant Secretary.

[FR Doc. 79-9183 Filed 3-26-79; 8:45 am]

[6450-01-M]

Title 18—Conservation of Power and Water Resources

CHAPTER I—FEDERAL ENERGY REGULATORY COMMISSION

[Docket No. RM75-27]

SUBCHAPTER F—ACCOUNTS, NATURAL GAS ACT

Correction

AGENCY: Federal Energy Regulatory Commission.

ACTION: Errata notice to final rule.

SUMMARY: The errata notice amends a final rule issued by the Commission on February 2, 1977, which adopted amendments to the Uniform System of Accounts relating to allowance for funds used during construction. The correction adds a sentence that was in the regulation before it was amended and was not intended to be deleted.

FOR FURTHER INFORMATION CONTACT:

Kenneth F. Plumb, Secretary, 825 North Capitol St., N.E., Washington, D.C. 20426; 202-275-4166.

SUPPLEMENTARY INFORMATION: The second sentence of the first paragraph of subparagraph "(17) Allowance for Funds Used During Construction" of Gas Plant Instruction "3. *Components of Construction Cost,*" was inadvertently omitted (42 FR 9165, February 15, 1977, first column, line 3). Accordingly, the first paragraph of subparagraph (17) shall read as follows:

GAS PLANT INSTRUCTIONS

* * * * *

* * * * *

2. *Components of Construction Cost.*

* * * * *

(17) "Allowance for funds used during construction" includes the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate on other funds when so used, not to exceed without prior approval of the Commission allowances computed in accordance with the formula prescribed in paragraph (a) below, except when such other funds are used for exploration and development or leases acquired after October 7, 1969, no allowance on such other funds shall be included in these accounts. No allowance for funds used during construction charges shall be included in these accounts upon expenditures for construction projects which have been abandoned.

* * * * *

Dated: March 19, 1979.

KENNETH F. PLUMB,
Secretary.

[FR Doc. 79-9260 Filed 3-26-79; 8:45 am]

[4110-07-M]

Title 20—Employers' Benefits

CHAPTER III—SOCIAL SECURITY ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

[Regulations No. 4, 16]

PART 404—FEDERAL OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE

Subpart P—Rights and Benefits Based on Disability

PART 416—SUPPLEMENTAL SECURITY INCOME FOR THE AGED, BLIND, AND DISABLED

Subpart I—Determination of Disability or Blindness

REVISED MEDICAL CRITERIA FOR THE DETERMINATION OF DISABILITY

AGENCY: Social Security Administration, HEW.

ACTION: Final Rule.

SUMMARY: These regulations revise the medical evaluation criteria for both the title II and title XVI disability programs. We last revised these criteria in 1968. The revisions reflect advances in the medical treatment of some conditions and in the methods of evaluating certain impairments. They provide current medical criteria for use in evaluating disability claims in these two programs.

DATES: March 27, 1979.

ADDRESSES: Comments on these regulations may be submitted at any time to the Commissioner of Social Security, Department of Health, Education, and Welfare, P.O. Box 1585, Baltimore, Md. 21203.

FOR FURTHER INFORMATION CONTACT:

Harry Short, Legal Assistant, 6401 Security Boulevard, Baltimore, Md. 21235, telephone 301-594-7415.

SUPPLEMENTARY INFORMATION: On July 12, 1978, a Notice of Proposed Rulemaking with proposed amendments to subpart P of regulations No. 4 and Subpart I of regulations No. 16 was published in the FEDERAL REGISTER (43 FR 29955).

THE PROGRAMS

The Social Security Act provides, under title II, for the payment of Federal disability insurance benefits to disabled individuals who are insured under the Social Security Act. The Act also provides, under title XVI, for the payment of benefits under the Supplemental Security Income program (SSI) to persons who are blind or disabled and who do not have income and resources at the established Federal minimum level. Under both programs blindness means central visual acuity of 20/200 or less in the better eye with the use of a correcting lens. We consider an eye in which the field of vision is limited so that the widest diameter of the visual field subtends an angle no greater than 20 degrees to have a central visual acuity of 20/200 or less. Disability under both programs (except for widow(er) benefits under title II and children under age 18 under title XVI) means inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of at least 12 months.

From the beginning of the disability program in 1955, we have had a list of medical impairments with sets of signs, symptoms and laboratory findings which, if present in a person applying for disability benefits, are sufficient to justify a finding that he or she is disabled, unless there is evidence to the contrary. These criteria are known as the Listing of Impairments (the Listing) and are contained in the current regulations of the Social Security Administration (SSA) as in appendix to Subpart P of Part 404 (regulations relating to disability under title II) and as an appendix to Subpart I of Part 416 (regulations relating to disability and blindness under title XVI).

The Listing includes medical conditions frequently found in people who file for disability benefits. It describes for each of the 13 major body systems, impairments that are severe enough to prevent a person from engaging in substantial gainful activity and which may be expected to result in death or

which have lasted or can be expected to last for a continuous period of not less than 12 months. From time to time we review and revise the Listing to reflect advances in medical treatment of some conditions and in the methods of evaluating certain impairments. We last revised the Listing in 1968, and added it to our regulations at that time.

How We Use the Listing

Since the Listing contains the medical criteria we use for evaluating disability it is an essential tool in the disability evaluation process. When we determine whether or not a person's impairment constitutes a disability, we normally follow a sequential evaluation process. We do not apply this process to claims involving statutory blindness under either program, title II claims from widow(er)s, or SSI claims by children under age 18. This process consists of 5 steps as follows:

(1) If the person is actually doing substantial gainful activity, we determine that he or she is not disabled no matter how severe his or her impairment(s) may be.

(2) If a person does not have any impairment(s) which significantly limits physical or mental capacity to perform basic work-related functions, we determine that he or she does not have a severe impairment and is not disabled, without considering the person's age, education and work experience.

(3) If a person is not actually doing substantial gainful activity and has an impairment(s) that is described in the Listing or has one or more impairments which is medically equal to one of the listed impairments, we may determine, without considering the person's age, education and work experience, that the person is disabled.

(4) If a person is not actually doing substantial gainful activity but has a severe impairment which does not meet or medically equal any of the listed impairments, we evaluate the person's residual functional capacity and consider the physical and mental demands of his or her past work. If we find that the person can do his or her past work, we determine that the person is not disabled.

(5) If a person cannot do any work that he or she did in the past because of a severe impairment(s), but has the physical and mental capacities to meet the demands of a significant number of jobs in the national economy and is able (considering the person's age, education, and past work experience) to perform work different from that done in the past, we determine that the person is not disabled. If, however, the person's physical or mental capacities, together with the factors of age, education, and past work experience do not permit an adjustment to work different from work the person did in the past, we determine that the person is disabled.

We do not use the sequential evaluation process when we evaluate blindness claims since blindness is defined by statute. We also do not use the sequential evaluation process when we evaluate title II widow(er) claims or SSI claims by children under age 18 since, to determine the question of disability in these claims, we consider only the person's physical or mental impairments.

Purpose of the Listing

Use of the Listing should insure that determinations have a sound medical basis, that we will be able to treat all persons applying for disability benefits equally, and that we will be able to readily identify the majority of persons who are unable to do any gainful activity. The Listing describes a level of severity which permits us to reasonable conclude that a person who has an impairment described in the Listing and who is not working, is unable to work because of that impairment. Thus, if a person's impairment or combination of impairments equals or exceeds the level of severity described in the Listing, we find that he or she is disabled on the basis of the medical facts, unless we have evidence to the contrary; for example, evidence that the person is actually doing substantial gainful activity.

Comments Received Following Publication of the Notice of Proposed Rulemaking

After publication of the Notice of Proposed Rulemaking, we received over fifty letters on the proposed medical criteria. The majority were from people and organizations whose responsibilities and interests give them some expertise in the evaluation of impairments. Many were from sources with specialized backgrounds and were quite detailed.

A number of the letters included several comments on the criteria within a particular body system, and some contained multiple comments on several body systems. Most of the comments we received concerned the specific evaluation criteria for particular impairments within the 13 body systems.

We have carefully considered all comments and have adopted many of them in whole or in part. These changes are identified in the discussion that follows and, where applicable, under the appropriate body system. Some were not adopted merely because of the nature and limitations of the medical criteria. The evaluation criteria are limited to those characteristics of any medical condition that occur frequently and consistently and at a level of medical severity that supports a determination of disability without taking into consideration the nonmedical factors of age, education, and work experience. Important aspects of many medical conditions cannot be reduced to this type of criteria.

At the end of the discussion for each body system, we discuss any additional changes we have made that were not in the Notice of Proposed Rulemaking and that do not relate to specific public comments. These changes were added as a result of discussions among our medical staff and consultants that arose from publication of the NPRM and consideration of the public comments. We believe these changes are consistent with others we are making and should not cause delay in the issuance of the final Listing. We believe that it would be contrary to public interest not to adopt the updated Listing at this time and we have found good cause to waive rulemaking procedures under section 553(b) of the Administrative Procedure Act for those changes. The Listing should be put into immediate effect so the advances in medical knowledge and technology that it includes can be used in the evaluation of disability claims. We plan to update the Listing in the future as we become aware of medical advances useful in disability evaluation. We appreciate and invite comments and suggestions from the public at any time regarding changes in the Listing.

We have renumbered certain sections of the appendices to correspond with the numbers of the sections for similar impairments in Part B of the Listing of Impairments in Appendix 1 of Subpart I of Part 416. Part B contains additional medical criteria for the evaluation of impairments for children under the age of 18 and, as we described in § 416.906(b), we are committed to maintaining a numbered relationship between these two sets of medical criteria. We have omitted numbers in the sequence for some body systems in both sets of criteria so that we can maintain the same numbers for each.

A discussion of the comments that were unrelated to the evaluation of specific impairments follows our discussion of the comments and changes in the 13 body systems.

1. Musculoskeletal System

Changes We Proposed in the Notice of Proposed Rulemaking

We added to the introduction a detailed discussion of the proper documentation and adjudicative principles to be used in cases involving intervertebral disc disease, which is the broad area under which nerve root compression is considered. We retitled § 1.07,

"Intervertebral disc disease (persistent)", to clarify the connection between this listing and the information in the introduction to this body system. We removed the requirement that persistent, active rheumatoid arthritis be documented by X-ray findings. We included criteria for evaluation of the residual impairment because of arthritis, whether from osteoarthritis or rheumatoid arthritis. We wrote separate sections for adjudication of the chronic arthritic impairments as they affect the upper or lower extremities. We clarified the requirements for osteoporosis. We eliminated specific requirements for tuberculosis of the spine or joints, since the residual impairment may be evaluated by referring to the criteria for arthritis or osteomyelitis.

Comments and changes

Comment: One commenter questioned the value of using a positive serologic test for rheumatoid factor when evaluating rheumatoid arthritis, since this factor is not positive in many persons who have this condition.

Response: The commenter's statement is correct. However, the rheumatoid factor is only one of three tests that may be used. Another test proposed in the Notice of Proposed Rulemaking is the elevated sedimentation rate. We have now added antinuclear antibodies as a third test. We require that only one of the three tests be met in addition to multiple joint involvement to justify a finding of rheumatoid arthritis.

Comment: This commenter also stated that our criteria for arthritis of the spine are incorrect because most patients with ankylosing spondylitis, one of the described conditions, are able to carry on their ordinary work.

Response: We agree that many people with this condition are able to work. However, we do not evaluate the severity of an impairment solely on a diagnosis. The criteria for this condition apply to people who have fixation of the spine at an extremely unfavorable angle, that is, at 30 degrees or more forward of the neutral upright position.

Comment: One letter included a comment that under the revised Listing we now require more particular and continuous abnormal findings for back cases.

Response: It is true that the revised introduction to this body system gives a more detailed description of the findings required to evaluate the impairment resulting from all vertebrogenic disorders, including intervertebral disc disease. This increased emphasis on detailed neurological and orthopedic findings is a result of program experience which shows that these findings are essential to confirm a diagnosis, to determine remaining physical function, and to arrive at a reasonable judgment on expected duration. The findings and clinical history referred to in the introduction to this body system are consistent with the examination findings that should be obtained during the evaluation and treatment of these back conditions.

ADDITIONAL CHANGES

We explained in the introduction that reports of atrophy of the hand muscles do not require measurements of the atrophy but do require measurements of grip strength. We deleted subsection C of § 1.03, which provided for the evaluation of an immobile knee joint fixed at an unfavorable angle. Our program experience shows that this condition is rarely found alone, and that it can be evaluated under the other criteria in this section. We renumbered the back conditions in §§ 1.05, 1.06, and 1.07 under the single major heading of § 1.05—Disorders of the spine—to show a more logical relationship between the findings and the site of the back pathology described. We divided the former § 1.12 into two sections—§ 1.12 dealing with fractures of an upper extremity, and § 1.13 dealing with surgical procedures for the salvage or restoration of major function after severe soft tissue injury to an upper or lower extremity.

2. SPECIAL SENSES AND SPEECH

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We added a statement that tangent screen visual fields are not acceptable as a measurement of peripheral field loss. In the section on otology, we provided specific requirements for documentation, and we defined "high volume" in terms of specific decibel levels. We added a section on deaf mutism. We also expanded the discussion on disturbances of the labyrinthine-vestibular function, and we clarified the criteria. We added specific criteria for organic loss of speech, including laryngectomy.

Comments and changes

Comment: We received comments from a national association concerned with speech and hearing handicaps. These comments included a detailed discussion of the technical standards for audiometric equipment, the acceptable standards for persons performing audiometric testing, and the conditions necessary for optimal testing of speech discrimination. Other commenters, including several State rehabilitation agencies, raised a number of these same points.

Response: We have, for the most part, adopted these comments and they are now reflected in the technical specifications in § 2.00B.

Comment: We received several comments which pointed out that multiple factors can affect the ability of a person with impaired hearing to make a vocational adjustment. For example, those who receive early diagnosis and training are more likely to develop a capacity to work.

Response: While these additional factors are important to the evaluation of disability, they are not included in the medical evaluation criteria because they are not medical factors. We consider factors that affect vocational adjustment to determine whether disability exists in those cases where the medical criteria of the Listing are not met.

Comment: We received a comment on the measurement of hearing impairments, which stated that our criteria should specify that audiometers be calibrated at least once a year.

Response: Our regulations refer to many types of testing equipment whose accuracy depends on periodic maintenance and monitoring. However, we believe that it is outside the scope of these regulations to cite standards of maintenance.

Comment: This commenter also stated that we should require people with hearing impairments to have other impairments before they can become eligible for disability benefits. The commenter pointed out that a person with severely impaired hearing may otherwise be in good general health and more able to overcome the impairment than persons with other impairments.

Response: We have retained severe loss of hearing in the Listing. The criteria for all of the listed impairments assume that there is a point of severity reached for each impairment at which it is unproductive and inequitable to further investigate and question a person's ability to work. The hearing loss criteria reflect that point of severity. The criteria for some impairments may describe situations where it is easier for persons with those impairments to make vocational adjustments than for persons with other impairments. We agree with the commenter that a person who suffers only severely impaired hearing may have the advantage of general good health, which should provide an opportunity and the motivation to acquire skills or education to overcome the impairment more easily than persons who have some of the other listed impairments. Even so, this is not inconsistent with keeping severe hearing loss as a listed impairment. Also, a severe impairment of one physical or mental faculty must necessarily impair other faculties and abilities; for instance, severe hearing loss often significantly impairs the ability

to communicate required in many jobs.

Comments: We received several comments pointing out that, unlike the other evaluation criteria, the term "deaf mutism" is merely a syndrome designation, presented without either measurable criteria or guides providing a structured approach to the evaluation of this condition.

Response: In response to these comments, we have deleted the term "deaf mutism" from the criteria in § 2.08. As was implied by the comments, use of this term is inconsistent with the intent of the evaluation criteria. Its deletion will not disadvantage applicants who have a combined loss of speech and hearing since they can be evaluated under other sections, as explained in the introduction.

ADDITIONAL CHANGES

We also changed the part of the introduction on the measurement of visual fields. This change broadens the acceptable means of field measurement by stating that perimetric devices comparable to the one in the listing (3 mm. white disc target at 330 mm.) may also be used.

3. RESPIRATORY SYSTEM

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

Since evidence of the activity of pulmonary tuberculosis (e.g., positive cultures, increasing lesions, or cavitation) is no longer considered a sound basis for establishing disability, we made a major change in the listing for tuberculosis. Specifically, we revised the criteria to provide that impairment caused by tuberculosis will be determined on the basis of (1) the resulting impairment to pulmonary function, or (2) the complications and abnormal clinical findings which may be present in a rare case of persistent pulmonary infection. We changed the requirement for determining arterial oxygen saturation in § 3.04C, Table III, to the more appropriate criteria of oxygen tension (arterial pO2). We removed Listing § 3.10, Organic Loss of Speech, from the Respiratory System and placed it under § 2.00, Special Senses and Speech.

Comments and changes

Comment: One commenter suggested that cystic fibrosis should be listed as a potentially disabling impairment. This commenter pointed out that while cystic fibrosis is usually associated with children, there are some adults who have this condition.

Response: This is quite true. However, the Listing is not intended to exclude an evaluation of any condition (even though not specifically listed) which results in chronic obstructive airway disease. We have therefore deleted any reference to specific diseases and have instead noted that this section should be used when chronic obstructive airway disease results from any cause.

Comment: This same commenter noted that the criteria for obstructive airway disease do not contain values obtained from the maximum midexpiratory flow rate. These values, the commenter pointed out, are used by many doctors who treat patients who have cystic fibrosis.

Response: The commenter's statement may be accurate. However, the spirometric values we provide in the criteria for obstructive airway disease are the values called for by the test which is the most widely used and whose results are the most easily obtained and interpreted by most physicians.

Comment: Another commenter stated that the new criteria for pulmonary tuberculosis include only the impairment to a person's pulmonary function. The commenter feels this is too restrictive because it eliminates the criteria for predicting that tuberculosis will remain active for 12 months.

Response: This is true. However, because of advances in the treatment of tuberculosis it is no longer realistic to presume that pulmonary tuberculosis will remain active for 12 or more months. However, the material in the introduction to this system makes it clear that, in a rare case where mycobacterial infection persists for a period closely approaching 12 months, we may determine a person to be disabled on the basis of limitations caused by the continuing infection.

ADDITIONAL CHANGES

We expanded the criteria for bronchial asthma to provide a more uniform approach in the evaluation of recurrent, severe attacks that may, in themselves, be disabling. We replaced the statement that the reported maximum voluntary ventilation (MVV) should be the largest of at least three attempts by a statement that evaluation can be based on the value obtained from a single satisfactory performance. We expanded the introductory statement on the obtaining of spirometric values before or after administration of nebulized bronchodilators because the use of nebulized bronchodilators is the best method of determining whether the test values are adversely affected by a pulmonary condition that is temporary, episodic, or reversible by medical treatment. We deleted (in § 3.09B) the reference to the time during which the culture of specific organisms must be obtained to focus these criteria on the requirement of current x-ray evidence and hemoptysis.

4. CARDIOVASCULAR SYSTEM

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We combined the criteria dealing with ischemic heart disease, which were contained under five separate listing numbers, all of which require common symptoms, into one listing. We clarified the previous reference to "chest discomfort on effort" to show the requirement of angina pectoris or specific chest pain of cardiac origin. We also provided criteria for exercise tolerance testing and explained that treadmill testing is the method we prefer. We provided specific examples of medication or clinical findings which limit the use of findings from a resting or an exercise electrocardiogram under the Listing. We also provided specific criteria for "obstruction or narrowing" of coronary vessel(s) on angiography. We provided more definite criteria for evaluating congestive heart failure, aortic aneurysm, and peripheral vascular disease.

Comments and changes

Comment: One letter, from a professional society concerned with the treatment of heart disease, dealt with the need to base the evaluation of disability on demonstrated capacity to tolerate physical exertion without developing symptoms or ECG abnormalities. It also pointed out that many people are able to return to full activity following convalescence from a myocardial infarction, and that controlled exercise tests are now available to evaluate exertional tolerance. By using these tests, this commenter believes we would be able to determine more accurately the types of work a heart patient may still be able to perform.

Response: This comment reinforces a longstanding concern we have had. The criteria for this body system proposed in the NPRM and presented in these final regulations are revisions of criteria that were used in the early years of the disability program. The earlier criteria attempted to allow for determination of exertional capacity by clinical history—that is, on the claimant's own description of the types and amount of activity that he or she could tolerate without developing cardiac symptoms. We found this to be unobtainable in some cases, contradictory in others, and always highly subjective and difficult to interpret.

We favor the approach advocated by this commenter. However, before we can fully incorporate exercise testing in the criteria, we need more information on the availability and costs of these procedures in all areas of the

nation. We must also consider the possible individual exceptions to this approach. Therefore, we have not adopted this suggestion at this time. We do, however, recognize the significance of the results of exercise tests. Under the revised criteria we will evaluate exercise tests which were given during the course of medical treatment, or we will purchase them in cases in which the other evidence does not confirm ischemic heart disease. This is now explained in the introductory section. This revision will lead to more equitable decisions in cases where exercise tests are now available.

Comment: This commenter also suggested that there be some reference to persons who have reduced cardiac output without signs of vascular congestion and that the section on exercise testing mention acceptable exercise protocols in addition to the one in the Listing (the Bruce protocol).

Response: We adopted both suggestions. We revised the introductory section on congestive heart failure to show that at the time of adjudication signs of vascular congestion need not be continuing in all cases, and to show the Bruce protocol as an example of acceptable standard protocols.

Comment: The other commenter is concerned that the revised cardiovascular section appears to require more specificity regarding chest pains and more documentation.

Response: The commenter is correct. We expanded the discussion of the significance of chest pain and related findings in the revised introduction. However, the expansion is primarily concerned with the approach to and interpretation of findings, rather than the need for additional findings or other evidence.

ADDITIONAL CHANGES

We expanded the discussion of the significance of the electrocardiogram findings obtained during exercise tests. Since the last revision of the Listing, there has been a marked increase in the use of exercise tests. This increase is due, for the most part, to treatment which emphasizes returning heart patients to the highest level of activity safely permitted by their conditions. There is now a greater understanding of the significance of findings obtained during exercise, and we expanded the introduction to this body system to address this, rather than to set up additional evaluation criteria that are not related to current approaches to the treatment of heart disease.

5. DIGESTIVE SYSTEM

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We added to the introduction a discussion to help decide whether a gastrointestinal impairment may be expected to last at least 12 months. In the Listing for chronic liver disease we inculded criteria where cirrhosis of the liver has not been established by liver biopsy and certain additional criteria where it has been established by liver biopsy. We added a criterion to establish recurrent upper gastrointestinal hemorrhage from undetermined cause. We wrote more specific criteria for peptic ulcer disease, and we clarified the criteria for chronic ulcerative colitis, regional enteritis, and weight loss.

Comments and changes

Comments: We received no public comments on this body system.

ADDITIONAL CHANGES

We changed the criteria for the evaluation of liver disease. We eliminated the reference to hepatic coma because it usually occurs at a level of severity well beyond that represented by the other criteria in this section. A person who experiences hepatic coma will have already demonstrated one or more of the other specified findings.

6. GENITO-URINARY SYSTEM

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We added specific criteria for determining the presence of chronic renal disease. To provide a realistic level of abnormality, we added a specific serum creatinine level and we changed the requirement for BUN (blood urea nitrogen) from 30 to 50mg. per deciliter (100 ml.). We added criteria to evaluate claims involving periodic renal dialysis and kidney transplant.

Comments and changes

Comment: One commenter believes that there is a possible oversight in the renal dialysis criteria because the criteria do not mention the difficulties which dialysis patients may have working a normal 8-hour day.

Response: Persons who require periodic dialysis because of chronic kidney disease do meet the medical requirements for a finding of disability. Thus, it is unnecessary to make an individual judgment on whether these severely impaired persons may be able to adjust to work.

ADDITIONAL CHANGES

As we explained in the Notice of Proposed Rulemaking, we changed the BUN value from 30 to 50 mgs. per deciliter. Raising this value, however, was an imperfect solution. The BUN is not the most reliable index of kidney function. Although use of a higher level may exclude those persons who have few symptoms or limitations it may also exclude others who have severe limitations that should be evaluated by established medical criteria. While we received no comments on the increased BUN level, we consulted with several physicians specializing in the treatment of kidney disease. As a result of these discussions we concluded that more discrete kidney function tests are now available and that it is no longer desirable to provide for the BUN in the criteria as an option. We therefore eliminated the BUN test and added other signs of severe kidney disease. We believe these will have much broader applicability than the prior criteria that placed greater reliance on laboratory tests alone. In addition, we revised and placed the criteria for impaired renal function in a single subsection (§ 6.02C).

We also revised the criteria for nephrotic syndromes. These criteria require severe anasarca (generalized edema), in combination with widely used laboratory tests for kidney filtration, as the clinical sign of severe nephrosis. We added more introductory material to explain the revised criteria for nephrotic syndromes. We also eliminated § 6.03, which deals with renal impairments that result from permanent diversion because we can more properly evaluate severe renal impairments from this cause under § 6.02C.

7. HEMIC AND LYMPHATIC SYSTEM

CHANGES PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We added the need for frequent blood transfusions to the criteria under § 7.02—Chronic Anemias. We deleted the former separate Listing for hemolytic anemia so that we may evaluate this impairment under the general criteria for chronic anemia.

Instead of including sickle cell disease under hemoglobinopathies, we listed sickle cell disease as a separate heading. We also changed the criteria from hemolytic crises with a drop in hemotocrit to the occurrence of painful (thrombotic) crises as a possible indicator of the severity of the disease. We also added criteria which take into account the occurrence of episodes of related severe disease or impairments of other body systems. The revised criteria for acute leukemia provide for a finding of disability for 2½ years from the time of initial diagnosis. Although very few adults now survive that long, we did this so that the criteria will be applicable in the future when there will likely be improved response to therapy. Persons who survive beyond that time may no longer be disabled and their claims require further evalu-

ation. We changed the criteria for chronic leukemia to refer to other criteria in the Listing. We transferred myeloma from § 13.00—Neoplastic Diseases, Malignant, and added more definite criteria. We also added criteria for chronic granulocytopenia and chronic thrombocytopenia and clarified the criteria for hereditary telangiectasia, coagulation defects, myelofibrosis (previously titled "chronic bone marrow failure"), and macroglobulinemia.

Comments and changes

Comment: We received one comment. The commenter was concerned that the requirements for evaluating hemophillia would result in the improper denial of benefits to young children.

Response: The commenter was apparently unaware of the supplementary Listing for children in the Appendix to Subpart I of Part 416. The additional medical criteria for evaluating impairments of children under age 18 are used when the criteria in the "adult Listing" do not give appropriate consideration to the particular disease process in childhood.

Comment: This commenter was also concerned that people with congenital platelet disorders such as Glanzmann's disease or hemophilia with antifactor VIII antibodies are not covered by the medical criteria in this section.

Response: This is true. The Listing criteria are intended to identify the more commonly occurring impairments shown in applications for social security disability benefits. However, if a person's impairment is not specifically described in these medical criteria, we decide whether the impairment is medically equal to a listed impairment or whether the impairment would otherwise prevent the person from doing substantial gainful activity.

ADDITIONAL CHANGES

We modified § 7.06B to recognize the significance of intercranial bleeding due to chronic thrombocytopenia during the 12 months prior to adjudication rather than merely in the period from alleged onset to adjudication.

8. SKIN

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We expanded this section to provide specific criteria for several more skin disorders, including psoriasis, atopic dermatitis, and deep mycotic infections.

Comments and changes

Comment: We received one comment. The commenter believes we are making it more difficult to establish disability for skin diseases because of our statement that these diseases, when properly treated, are rarely disabling.

Response: This comment apparently resulted from a misunderstanding. We removed this statement in the Notice of Proposed Rulemaking even though it is our esperience that skin diseases are rarely disabling. We emphasized that response to treatment is an important consideration. We believe this factor is medically valid. Its purpose is to caution against making a determination of disability when the only impairment is a skin condition that can be expected to improve and not to last for at least 12 months.

9. ENDOCRINE SYSTEM

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

The only change we made was to clarify the criteria for diabetic retinopathy.

Comments and changes

Comment: We received no comments on this system.

ADDITIONAL CHANGES

We made two revisions. We deleted the section for evaluating adrenal cortical insufficiency because the severe symptoms that were described there rarely occur. We cross referred the subsection dealing with visual changes resulting from diabetes mellitus to the sections on the measurement of visual loss. We have found that, in the absence of visual loss, direct examination of the eye is not a good indicator of the impairment resulting from diabetes mellitus.

10. MULTIPLE BODY SYSTEMS

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We provided criteria for evaluating obesity based upon its usual complications. These criteria require more than the documentation of those findings that are almost universally associated with marked obesity (e.g., peripheral edema, dyspnea on exertion). They require documentation of congestive heart failure (or a history of this) with peripheral edema (or other evidence of significant vascular congestion), respiratory disease, including a finding of dyspnea, with specified abnormalities of pulmonary function tests, etc. We deleted the criteria for tuberculosis adenitis because this condition is rarely found in disability claims. We also eliminated the specific criteria for evaluating active miliary tuberculosis because experience has shown that miliary tuberculosis usually responds to treatment within 12 months. We provided instead for evaluating any residual effects of the disease.

Comments and changes

Comment: We received one comment. The commenter stated that the criteria for obesity would have little effect because the required findings are sufficient to establish disability without obesity.

Respones: The criteria under this section do have to have some relationship to similar impairments described under other body systems. However, they also take into account the contributing complication of obesity when it reaches the extremes specified by the tables. For example, the subsection dealing with arthritis of a weight-bearing joint does not require evidence of the advanced joint pathology required in the comparable section in the musculoskeletal section. We omitted this criterion for the obese person because we recognize the decreased ability of an impaired joint to bear the stress produced by extreme obesity. We also concede that joint pathology associated with extreme obesity will progress rapidly.

11. NEUROLOGICAL

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We expanded the discussion on the documentation and adjudication of convulsive disorders. We changed the expression "moderate motor deficit" to "significant and persistent disorganization of motor function". We clarified the fact that impairments which result from degenerative disease cannot be adjudicated on the mere statement of the diagnosis. We also added criteria for cerebral trauma and syringomyelia.

Comments and changes

Comment: One commenter stated that the language in this section reflects a belief that most neurological impairments, when properly controlled, do not prevent an individual from working for a continuous 12-month period.

Response: We did not intend to give the impression that most neurological conditions are subject to improvement or correction. Eighteen separate medical conditions are listed under the neurological section. Most of them are static or progressive in nature. The discussion in the introduction to this body system about the treatment and the duration of the impairment is directed at exceptions such as multiple sclerosis. This impairment is often characterized by periods of exacerbation and remission. Convulsive disor-

ders are also discussed in this context since they are controllable in most cases. However, we reviewed all of the references to treatment in the criteria for specific impairments and deleted these references from §§ 11.07D and 11.08. We believe all remaining references in this section on neurological conditions that relate to impairment duration and treatment are medically sound since they are specifically directed at particular impairments.

Comment: Another commenter suggested that we expand the criteria for multiple sclerosis to include the overall impact of the diverse manifestations of this condition, including loss of balance, visual disturbance, intension tremors, weakness of the limbs, and loss of coordination.

Response: The current criteria do include the signs and symptoms mentioned by the commenter. The criteria, however, focus on these signs and symptoms at a point of severity when they severely limit the ability to walk, to use the arms, or to see. This emphasis is consistent with the purpose of the Listing, which identifies impairments with a level of severity which can be assumed to prevent a person from doing gainful activity. As the commenter points out, multiple sclerosis, a disease with variable and multiple manifestations, can be shown to be a severe impairment by a combination of symptoms and signs other than those described by the listed criteria. It is not possible, however, to reduce these multiple manifestations to a listing. The Listing is but one item in the evaluation process. We evaluate cases of claimants whose conditions do not meet or medically equal the criteria of a listed impairment under other rules. Under these rules we consider the person's condition, age, education, and work experience to determine whether the person is disabled.

Comment: Another commenter felt that certain persons with severe cerebral palsy might not meet any of the four criteria that are listed in § 11.07. The commenter gave as an example a person with quadriplegia or paraplegia who is still able to communicate verbally. The commenter then mentioned that one of the cerebral palsy criteria might include a person with this type of impairment.

Response: The commenter is correct. The criteria which relate to significant disorganization of motor function in two extremities are intended to cover the example given. We made clarifying changes in the wording of these criteria.

Comment: We received two comments which suggested that criteria should be included for narcolepsy. One comment stressed that there seems to be little uniformity in the treatment of narcolepsy and little understanding of the problems encountered by persons with this condition. The commenters felt that we should include specific criteria that describe narcolepsy and that this would result in more equitable evaluation.

Response: We share the commenters' concerns about the evaluation of narcolepsy and other sleep disorders. However, we do not agree that it should be added to the Listing at this time. Our experience shows that a detailed, individual approach is necessary to evaluate narcolepsy. The varying effects of narcolepsy prevent us from formulating at this time criteria which could be applied to many applicants. The many factors that we must consider include the frequency of the sleep episodes, their duration, the presence or absence of signs that warn of an approaching episode, the control achieved by medication, and the presence and significance of associated conditions, such as cataplexy. We are considering this problem as it relates to disability applicants. We are also considering whether to provide specific evaluation criteria at some future time.

ADDITIONAL CHANGES

We expanded the heading of the section on cerebrovascular accidents (§ 11.04) to include the evaluation of vascular accidents occurring at other sites in the central nervous system. We deleted the reference to pseudobulbar palsy (§ 11.04B) because it is rarely found and people who do have this condition can be evaluated under other criteria. We removed the reference to a sleep record EEG to avoid the misunderstanding that this test be purchased by us if it is not so essential to adjudication that it should be a matter of record. We added another example of a brain tumor that should be evaluated under § 11.05B.

12. MENTAL DISORDERS

CHANGES WE PROPOSED IN THE NOTICE OF PROPOSED RULEMAKING

We expanded and clarified the introduction to provide a better basis for understanding the documentation and adjudicative requirements of these criteria. We eliminated the section for antisocial and amoral behavior since these are criteria for diagnosis and not descriptions of impairment severity. We changed the initial IQ requirement for severe mental retardation from 49 to 59. We also changed the first part of the criteria for mental retardation in § 12.05C by raising the IQ level from 50–69 to an IQ of 60–69. We also clarified the second part of the criteria for mental retardation in § 12.05C to show that a physical or other mental impairment must impose additional and significant work-related limitation of function. We eliminated the criterion which deals with performing routine, repetitive tasks since this criterion cannot be evaluated medically.

Changes and comments

Comment: One commenter suggested that we delete that portion of the introduction which provided for IQ tests to be administered by vocational counselors or specially-trained persons in school systems.

Response: We agree. We deleted that part from the introduction because it is rarely used and we no longer consider it necessary.

Comment: A number of commenters were concerned that the repeated use of the terms "psychiatric examination," "psychiatric diagnosis," and other similar phrases could be interpreted to exclude reports submitted by certified psychologists.

Response: We did not intend that interpretation. In fact, the introduction to this section describes the type of evidence we prefer for evaluating mental disorders and "psychologists' reports" are included. Nevertheless, to avoid the impression that acceptable evidence is limited to reports from physicians specializing in the practice of psychiatry we removed the word "psychiatric" from this section, wherever we could.

Comment: One commenter suggested that we incorporate professional standards for psychologists by adopting the standards developed by professional psychological associations.

Response: We have not adopted this suggestion. Psychologists are certified or licensed under State laws which generally reflect the standards recommended by psychological associations. We rely on established State licensing or certification procedures which makes it unnecessary to include a description of the professional qualifications of those contributing reports for disability evaluation.

Comment: Another commenter stated that we should not consider psychological tests administered by psychiatrists, because psychiatrists are not trained to evaluate and interpret these tests.

Response: We agree that in order to be useful, psychological tests must be administered by people who are trained and experienced in their administration and interpretation. We clarified this point in § 12.00B4 by providing that these tests be administered and interpreted by a psychologist or psychiatrist who is qualified by training and experience to do this evaluation.

Comment: Another commenter questioned the use of IQ measurements. The commenter feels that IQ tests are

unreliable and unrelated to a person's actual performance.

Response: While this may be true in certain instances, it does not rule out the use of the IQ test for the purpose of disability evaluation. We use IQ tests to identify people with severe mental retardation. Under the conditions required in § 12.00B4, we have found the IQ measurement to be a valuable and reliable means of determining whether a person has severe mental retardation.

Comment: One commenter stated that the criteria for mental retardation in § 12.05 are different from the criteria used by some vocational rehabilitation programs. The commenter believes that this leads to situations where some people are found to be ineligible for disability benefits, but are found to be too disabled to benefit from vocational rehabilitation. To correct this, the commenter suggests that we change the IQ criteria to include all people who are often considered to have subaverage intelligence. This would include persons whose performance on an individual test of intelligence is at least one standard deviation below the mean; that is a level which corresponds to an IQ of approximately 85 on the most commonly used standardized intelligence tests.

Response: We have not adopted this suggestion because it is inconsistent with the purpose of the Listing, which is to identify people with severe mental retardation. The suggested criteria could result in eligibility for disability benefits for many people who do not have severe adjustment problems or greatly restricted work capacity.

Comment: One commenter stated that mental retardation becomes more difficult to establish under the proposed Listing.

Response: We do not agree. We revised the IQ level upward from 49 to 59. This will result in more claims being determined on the IQ standard alone without considering additional factors. Thus, the criteria are easier to meet. We did this on the basis of program experience. We found it unproductive to evaluate the potential vocational capacity of persons who score 59 or less on well-standardized, validated IQ tests which are professionally-administered.

Comment: One commenter suggested that we use "or" instead of "and" in listing the requirements in § 12.05A. These requirements are marked dependence upon others for personal needs, inability to understand the spoken word, inability to avoid physical danger, inability to follow simple directions, and inability to read, write, and perform simple calculations. They are each joined by the conjunction "and," rather than by the conjunction *"or."*

Response: We have not adopted the suggested change. This change would, in effect, allow a person to meet the Listing if any one of these criteria were present. For example, this change would permit a person to get disability benefits merely because he or she cannot read or write. This would not be consistent with the intent of the Listing. The requirements in § 12.05A are intended to describe a class of severely retarded persons for whom formal intelligence testing is unnecessary to establish disability.

Comment: We received extensive comments from a national organization interested in all aspects of mental retardation concerning the use of adaptive behavior scales to measure personal independence and social responsibility. This organization feels that incorporation of adaptive behavior scales in the Listing would provide valuable information on the social and environmental factors that determine a person's ability to perform appropriately in a working situation. These comments quote material from the last paragraph of the introductory § 12.00B4 and from the criteria in subsection A of § 12.05. They point out the subjective nature of the information called for in these sections, and state that any reservations about adaptive behavior scales on the basis of their subjectivity should be viewed in light of the general information called for in these two sections.

Response: The criteria for the evaluation of mental deficiency contained in § 12.05 encompass two situations: (1) when the retardation is not severe enough to preclude intelligence testing; i.e., those individuals being evaluated under subsections B and C, which provide IQ values; and (2) when the degree of retardation precludes a realistic attempt at formal intelligence testing, with subsection A used as a means of determining this. Thus, we use subsection A, the section referred to by this commenter, along with the related section in the introduction, only to identify the most severe cases of mental retardation. It excludes persons who have been professionally tested with a standardized IQ test. When mental retardation is the issue in the case of a claimant who has never been tested, we arrange for an intelligence test to be given, *unless* the description in subsection A applies.

Our experience indicates that the group of applicants who cannot be realistically tested is not particularly difficult to identify. Most of the persons within this group require heroic care or manifest marked departures in all areas described. The type of evidence relied on in these cases, as suggested by the comments, is largely based on observations similar to those that would be used in a behavior scale, but in this case is used only for the restricted purpose discussed in the preceding paragraph. Evidence from a behavior scale, if available, could be used in the evaluation of mental retardation. However, the utilized portion consists of the actual behaviors observed and reported, rather than any derived numerical values.

Additional Changes

We added a statement to the introduction that provides for the use of the lowest of the three values generally obtained (verbal, performance, and full scale IQ's). This method is not only consistent with the intent of the Listing but with current practice in psychology. We have used this method in disability evaluation for some time. Also, we reorganized §§ 12.02, 12.03, and 12.04 to emphasize that the criteria cited in subsection B of each of the three sections must *all* be present and *result* from the person's mental condition in cases of chronic brain syndromes and functional psychotic or nonpsychotic disorders.

13. Neoplastic Diseases Malignant

Changes we proposed in the notice of proposed rulemaking

We clarified that other sources of the surgical and pathology findings may be used when a copy of the operative note and pathology report is not available from the hospital record. We made a number of changes in the introduction and in the criteria to clarify the requirements and to recognize current medical knowledge on the course of malignancies and their responses to therapy. We clarified the terms "distant metastasis" and "metastasis beyond the regional lymph nodes."

Previously we indicated that distant metastases which have apparently disappeared and have not been evident for 5 or more years will not be considered severe. We have changed this to show that distant metastases which have apparently disappeared and have not been evident for 3 or more years will not be considered severe. We added a new section on "Head and Neck" tumors to replace the previous section on "Epidermoid carcinoma", since many epidermoid carcinomas are already covered under other sections. We changed the Listing to take into account the much improved response of Hodgkin's disease and non-Hodgkin's lymphomas to chemotherapy in some cases. We cautioned that, in evaluating lymphomas, the tissue type and site of involvement are not necessarily indicators of the severity of the impairment. We moved myeloma to

§ 7.00—Hemic and Lymphatic System—and rewrote the general criteria for malignant primary tumors of bone (excluding the jaw) to require evidence of metastases which are not controlled by prescribed therapy. We simplified the criteria for carcinoma of the lung. We deleted criterion for metastatic carcinoma or sarcoma to the lung, since some of these conditions may respond to chemotherapy, and it would be difficult to provide an accurate list of all their signs. These cases should be adjudicated on the basis of the primary site of the malignancy. Since a number of tumors arise in the mediastinum, we combined the criteria for malignancies arising in this site and stated the requirements for all of these in terms of whether they are controlled by prescribed therapy. We changed the requirement for carcinoma of the distal one-third of the esophagus or of the stomach from metastases "beyond the regional lymph nodes" to metastases "to the regional lymph nodes". We excluded certain islet cell carcinomas of the pancreas from an automatic finding of disability.

Comments and changes

Comments: We received no comments on this body system.

ADDITIONAL CHANGES

We expanded the introductory material in § 13.00D to include a discussion on the effects of therapy for the control of neoplasms. Also, we changed the medical criteria for §§ 13.06, 13.13, 13.19, and 13.28 based on the probable course these conditions will take and on the treatment that is now available.

GENERAL COMMENTS

We received several comments that did not address the evaluation of particular impairments. These comments were concerned with the extent of physician participation in the revisions to the Listing and the extent to which a claimant who needs specialized tests would be able to pay for them. These commenters also expressed some concern about whether the medical criteria are consistent with evaluating claims on an individual basis.

Comment: One commenter suggested that we identify the medical schools and experts who participated in updating the Listing. The commenter felt this would increase the credibility of the Listing.

Response: We have not adopted the suggestion. We believe the criteria must stand on their own merit, apart from the individual professional qualifications of those who helped to make the change. However, to give readers some perspective on the professional background of those involved in developing the medical criteria we included a statement on physician participation. We also did this to establish that SSA has its own highly competent staff of physicians and other medical personnel.

Comment: Another commenter thought that the revised criteria are more restrictive.

Response: In preparing this revision, we approached each of the impairments individually. In some areas we concluded that we should include more specific findings. We also eliminated some findings in other areas where they have not proved to be essential to the evaluation of certain impairments.

The revised criteria probably call for some overall increase in documentation, since a major purpose of the revision is to recognize medical advances and changes in medical technology. As additional medical tests and procedures are developed or, as is more often the case, the use of more discrete tests becomes more widespread, it is necessary to incorporate them into the evaluation criteria. For this reason the criteria for some impairments have been expanded but this does not mean that they are more restrictive. They are intended to be more selective and to better identify persons who have severe impairments. Under the revised criteria a particular claimant should not find it more difficult to document his or her disability claim. The new or additional findings called for are those that are now used in diagnosis and treatment; thus, they should be available or readily obtainable.

Comment: This same commenter felt that the revised criteria are prejudiced against the poor, who do not have funds to pay for the tests needed to prove their disability.

Response: Neither of the disability benefit programs (titles II and XVI) requires the claimant to pay for additional specialized tests that may be needed to determine whether the Listings are met. Any additional examinations or tests, other than those available during the course of treatment, are arranged and paid for by the Social Security Administration. The claimant is not obligated to determine what additional findings are required.

Comment: Another commenter stated that we are not adjudicating disability claims on an "individualized" basis, as mandated by Congress.

Response: We recognized the possibility of a misunderstanding and so we included in the preamble to the Notice of Proposed Rulemaking a discussion of how the Listing is used as one element in the individual approach in the disability determination process. We look at each person's individual record and apply the rules pertinent to the facts in that person's record. If a person who is not working has an impairment(s) that meets the criteria provided in this Listing (and meets all of the other eligibility requirements) we will find the person disabled. This longstanding use of a listing of severe impairments which results in findings of disability, without applying other elements used in the disability determination process, has been in our regulations for many years and is accepted as fully consistent with what the commenter describes as the individualized adjudication mandated by Congress.

Comment: Another commenter stated that the medical criteria do not have different requirements for different kinds of occupations. The commenter also stated that many of the conditions that are accepted as prima facie evidence of disability would actually permit many people to work at almost their normal capacity in occupations that do not require physical activity.

Response: The Listing is a list of severe impairments. A few people with a listed impairment may be able to work because they are making a supreme effort or because of special circumstances. These are rare cases. We can not write a set of criteria for rare cases.

For the criteria to be valuable in adjudication, they must have some flexibility. If the level of severity for each impairment were set at a point which prevents every claimant from engaging in every conceivable occupation, the Listing would be too restrictive to be useful.

Comment: Another commenter pointed out that in the public workshops conducted by us in several cities we did not mention the proposed medical criteria, and that our failure to do so prevented an interchange of ideas on this important issue.

Response: The workshops to which the commenter refers were conducted in an effort to be more responsive to public concerns about the various programs we administer. The people who were there, by and large, determined the topics we discussed. Because of their highly technical nature, the changes to the Listing were not considered appropriate for discussion and comment at a forum that was intended to cover many general social security issues.

The amendments are hereby adopted as revised and set forth below.

(Sections 205, 216(i), 223, 1102, 1614(a) and 1631 of the Social Security Act, as amended; 53 Stat. 1368, as amended; 66 Stat. 771, as amended, 70 Stat. 815, as amended; 49 Stat. 647, as amended; 86 Stat. 1471(a); 86 Stat. 1475; 42 U.S.C. 405, 416(i), 423, 1302, 1382c(a) and 1383.)

(Catalog of Federal Domestic Program Nos. 13.802, Social Security—Disability Insurance; 13.807, Supplemental Security Income Program.)

Dated: February 17, 1979.

STANFORD G. ROSS,
Commissioner of Social Security.

Approved: March 17, 1979.

HALE CHAMPION,
Acting Secretary of Health, Education, and Welfare.

Parts 404 and 416 of chapter III of the Code of Federal Regulations are amended as follows:

1. The table of contents in the appendix of subpart P of part 404 and the table of contents in part A of appendix 1 of subpart I of part 416 are revised by revising the titles of § 2.00 from "Special Sense Organs" to "Special Senses and Speech."

2. All the material following the table of contents in the appendix to subpart P of part 404 and following the table of contents in part A of appendix 1 of subpart I of part 416 is revised to read as follows:

1.00 MUSCULOSKELETAL SYSTEM

A. *Loss of function* may be due to amputation or deformity. Pain may be an important factor in causing functional loss, but it must be associated with relevant abnormal signs or laboratory findings. Evaluations of musculoskeletal impairments should be supported where applicable by detailed descriptions of the joints, including ranges of motion, condition of the musculature, sensory or reflex changes, circulatory deficits, and X-ray abnormalities.

B. *Disorders of the spine,* associated with vertebrogenic disorders as in § 1.05C, result in impairment because of distortion of the bony and ligamentous architecture of the spine or impingment of a herniated nucleus pulposus or bulging annulus on a nerve root. Impairment caused by such abnormalities usually improves with time or responds to treatment. Appropriate abnormal physical findings must be shown to persist on repeated examinations despite therapy for a reasonable presumption to be made that severe impairment will last for a continuous period of 12 months. This may occur in cases with unsuccessful prior surgical treatment.

Evaluation of the impairment caused by disorders of the spine requires that a clinical diagnosis of the entity to be evaluated first must be established on the basis of adequate history, physical examination, and roentgenograms. The specific findings stated in § 1.05C represent the requirements for the level of severity of that impairment; these findings, by themselves, are not intended to represent the basis for establishing the clinical diagnosis. Furthermore, while neurological examination findings are required, they are not to be interpreted as a basis for evaluating the severity of any neurological impairment. Neurological impairmants are to be evaluated under §§ 11.00-11.19. The history must include a detailed description of the character, location, and radiation of pain; mechanical factors which incite and relieve pain; prescribed treatment, including type, dose, and frequency of analgesic and typical daily activities. Care must be taken to ascertain that the reported examination findings are consistent with the individual's daily activities. There must be a detailed description of the orthopedic and neurologic examination findings. The findings should include a description of gait, limitation of movement of the spine given quantitatively in degrees from the vertical position, motor and sensory abnormalities, muscle spasm, and deep tendon reflexes. Observations of the individual during the examination should be reported; e.g., how he or she gets on and off the examining table. Inability to walk on heels or toes, to squat, or to arise from a squatting position, where appropriate, may be considered evidence of significant motor loss. However, a report of atrophy is not acceptable as evidence of significant motor loss without circumferential measurements of both thighs and lower legs (or upper or lower arms) at a stated point above and below the knee or elbow given in inches or centimeters. A specific description of atrophy of hand muscles is acceptable without measurements of atrophy but should include measurements of grip strength. These physical examination findings must be determined on the basis of objective observations during the examination and not simply a report of the individual's allegation, e.g., he says his leg is weak, numb, etc. Alternative testing methods should be used to verify the objectivity of the abnormal findings, e.g., a seated straight-leg raising test in addition to a supine straight-leg raising test. Since abnormal findings may be intermittent, their continuous presence over a period of time must be established by a record of ongoing treatment. Neurological abnormalities may not completely subside after surgical or nonsurgical treatment or with the passage of time. Residual neurological abnormalities, which persist after it has been determined clinically or by direct surgical or other observation that the ongoing or progressive condition is no longer present, cannot be considered to satisfy the required findings in § 1.05C.

Where surgical procedures have been performed, documentation should include a copy of the operative note and available pathology reports. Electrodiagnostic procedures and myelography may be useful in establishing the clinical diagnosis, but do not constitute alternative criteria to the requirements in § 1.05C.

C. *After maximum benefit from surgical therapy* has been achieved in situations involving fractures of an upper extremity (§ 1.12), or soft tissue injuries of a lower or upper extremity (§ 1.13), i.e., there have been no significant changes in physical findings or X-ray findings for any 6-month period after the last definitive surgical procedure, evaluation should be made on the basis of demonstrable residuals.

D. *Major joints* as used herein refer to hip, knee, ankle, shoulder, elbow, or wrist and hand. (Wrist and hand are considered together as one major joint.)

E. *The measurements of joint motion are* based on the techniques described in the "Joint Motion Method of Measuring and Recording," published by the American Academy of Orthopedic Surgeons in 1965, or the "Guides to the Evaluation of Permanent Impairment—The Extremities and Back" (Chapter I); American Medical Association, 1971.

1.01 CATEGORY OF IMPAIRMENTS, MUSCULOSKELETAL

1.02 *Active rheumatoid arthritis and other inflammatory arthritis.* With both A and B:

A. Persistent joint pain, swelling, and tenderness involving multiple joints with signs of joint inflammation (heat, swelling, tenderness) despite therapy for at least 3 months, and activity expected to last over 12 months; and

B. Corroboration of diagnosis at some point in time by either:

1. Postive serologic test for rheumatoid factor; or

2. Antinuclear antibodies; or

3. Elevated sedimentation rate.

1.03 *Arthritis of a major weight-bearing joint (due to any cause):* With limitation of motion and enlargement or effusion in the affected joint, as well as a history of joint pain and stiffness. With:

A. Gross anatomcial deformity such as subluxation, contracture, bony or fibrous ankylosis, or instability; or

B. Ankylosis of the hip outside of the position of function (i.e., at less than 20° or more than 30° of flexion measured from the neutral position) and X-ray evidence of either joint space narrowing with osteophytosis or bony destruction (with erosions or cysts); or

C. Reconstructive surgery or surgical arthrodesis of a major weight-bearing joint and return to full weight-bearing status did not occur, or is not expected to occur, within 12 months of onset.

1.04 *Arthritis of one major joint in each of the upper extremities (due to any cause):* With limitation of motion and enlargement or effusion in the affected joints as well as a history of joint pain and stiffness and X-ray evidence of either joint space narrowing with osteophytosis or bony destruction (with erosions or cysts). With:

A. Abduction of both arms at the shoulders, including scapular motion, restricted to less than 90 degrees; or

B. Gross anatomical deformity such as subluxation, contracture, bony or fibrous ankylosis, joint instability, or ulnar deviation.

1.05 *Disorders of the spine:*

A. Arthritis manifested by ankylosis or fixation of the cervical or dorsolumbar spine at 30° or more of flexion measured from the neutral position, with X-ray evidence of:

1. Calcification of the anterior and lateral ligaments; or

2. Bilateral ankylosis of the sacroiliac joints with abnormal apophyseal articulations; or

B. Osteoporosis, generalized (established by X-ray) manifested by pain and limitation of back motion and paravertebral muscle spasm with X-ray evidence of either:

1. Compression fracture of a vertebral body with loss of at least 50 percent of the estimated height of the vertebral body prior to the compression fracture, with no intervening direct traumatic episode; or

2. Multiple fractures of vertebrae with no intervening direct traumatic episode; or

C. Other vertebrogenic disorders (e.g., herniated nucleus pulposus, spinal stenosis) with the following persisting for at least 3 months despite prescribed therapy and expected to last 12 months. With both 1 and 2:

1. Pain, muscle spasm, and significant limitation of motion in the spine; and

2. Appropriate radicular distribution of significant motor loss with muscle weakness and sensory and reflex loss.

1.08 *Osteomyelitis (established by X-ray):*

A. Located in the pelvis, vertebra, femur, tibia, or a major joint of an upper or lower extremity, with persistent activity or occurrence of at least two episodes of acute activi-

ty within a 5-month period prior to adjudication manifested by local inflammatory, and systemic signs and laboratory findings (e.g., heat, redness, swelling, drainage, leucocytosis, or increased sedimentation rate); or

B. Multiple localizations and systemic manifestations as in A above.

1.09 *Amputation or anatomical deformity of (i.e., loss of major function due to degenerative changes associated with vascular or neurological deficits, traumatic loss of muscle mass or tendons and X-ray evidence of bony ankylosis at an unfavorable angle, joint subluxation or instability):*

A. Both hands, or

B. Both feet, or

C. One hand and one foot.

1.10 *Amputation of one lower extremity (at or above the tarsal region):*

A. Hemipelvectomy or hip disarticulation; or

B. Amputation at or above the tarsal region due to peripheral vascular disease or diabetes mellitus; or

C. Inability to use a prosthesis effectively, without obligatory assistive devices, due to one of the following:

1. Vascular disease; or

2. Neurological complications (e.g., loss of position sense); or

3. Stump too short or stump complications persistent, or are expected to persist, for at least 12 months from onset; or

4. Disorder of controlateral lower extremity causing mobility restrictions.

1.11 *Fracture of the femur, tibia, tarsal bone, or pelvis:* With solid union not evident on X-ray and not clinically solid, when such determination is feasible, and return to full weight bearing status did not, occur or is not expected to occur within 12 months of onset.

1.12 *Fractures of an upper extremity:* With non-union of a fracture of the shaft of the humerus, radius, or ulna under continuing surgical management directed toward restoration of functional use of the extremity and such function was not restored or expected to be restored within 12 months after onset.

1.13 *Soft tissue injuries of an upper or lower extremity.* Requiring a series of staged surgical procedures within 12 months after onset for salvage and/or restoration of major function of the extremity, and such major function was not restored or expected to be restored within 12 months after onset.

2.00 SPECIAL SENSES AND SPEECH

A. *Ophthalmology*

1. *Causes of impairment.* Diseases or injury of the eyes may produce loss of central or peripheral vision. Loss of central vision results in inability to distinguish detail and prevents reading and fine work. Loss of peripheral vision restricts the ability of an individual to move about freely. The extent of impairment of sight should be determined by visual testing.

2. *Central visual acuity.* A loss of central visual acuity may be caused by impaired distant and/or near vision. However, for an individual to meet the level of severity described in §§ 2.02 and 2.04, only the remaining central visual acuity for distance of the better eye with best correction based on the Snellen test chart measurement may be used. Correction obtained by special visual aids (e.g., contact lenses) will be considered if the individual has the ability to wear such aids.

3. *Field of vision.* Impairment of peripheral vision may result if there is contraction of the visual fields. The contraction may be either symmetrical or irregular. The extent of the remaining peripheral visual field will be determined by usual perimetric methods at a distance of 330 mm under illumination of not less than 7 footcandles. Measurements obtained on comparable perimetric devices may be used; this does not include the use of tangent screen measurements. For the phakic eye (the eye with a lens), a 3 mm white disc target will be used, and for the aphakic eye (the eye without a lens), a 6 mm white disc target will be used. In neither instance should corrective lenses be worn during the examination but if they have been used, this fact must be stated.

Field measurements must be accompanied by notated field charts, a description of the type and size of the target and the test distance. Tangent screen visual fields are not acceptable as a measurement of peripheral field loss.

Where the loss is predominantly in the lower visual fields, a system such as the weighted grid scale for perimetric fields described by B. Esterman (see Grid for Scoring Visual Fields, II. Perimeter, *Archives of Ophthalmology*, 79:400, 1968) may be used for determining whether the visual field loss is comparable to that described in Table 2.

4. *Muscle function.* Paralysis of the third cranial nerve producing ptosis, paralysis of accommodation, and dilation and immobility of the pupil may cause significant visual impairment. When all the muscles of the eye are paralyzed including the iris and ciliary body (total ophthalmoplegia), the condition is considered a severe impairment provided it is bilateral. A finding of severe impairment based primarily on impaired muscle function must be supported by a report of an actual measurement of ocular motility.

5. *Visual efficiency.* Loss of visual efficiency may be caused by disease or injury resulting in a reduction of central visual acuity or visual field. The visual efficiency of one eye is the product of the percentage of central visual efficiency and the percentage of visual field efficiency. (See tables No. 1 and 2, following § 2.09.)

6. *Special situations.* Aphakia represents a visual handicap in addition to the loss of central visual acuity. The term monocular aphakia would apply to an individual who has had the lens removed from one eye, and who still retains the lens in his other eye, or to an individual who has only one eye which is aphakic. The term binocular aphakia would apply to an individual who has had both lenses removed. In cases of binocular aphakia, the central efficiency of the better eye will be accepted as 75 percent of its value. In cases of monocular aphakia, where the better eye is aphakic, the central visual efficiency will be accepted as 50 percent of its value. (If an individual has binocular aphakia, and the central visual acuity in the poorer eye can be corrected only to 20/200, or less, the central visual efficiency of the better eye will be accepted as 50 percent of its value.)

Ocular symptoms of systemic disease may or may not produce a disabling visual impairment. These manifestations should be evaluated as part of the underlying disease entity by reference to the particular body system involved.

7. *Statutory blindness.* The term "statutory blindness" refers to the degree of visual impairment which defines the term "blindness" in the Social Security Act. Both §§ 2.02 and 2.03 A and B denote statutory blindness.

B. *Otolaryngology*

1. *Hearing impairment.* Hearing ability should be evaluated in terms of the person's ability to hear and distinguish speech.

Loss of hearing can be quantitatively determined by an audiometer which meets the standards of the American National Standards Institute (ANSI) for air and bone conducted stimuli (i.e., ANSI § 3.61969 and ANSI § 3.13–1972, or subsequent comparable revisions) and performing all hearing measurements in an environment which meets the ANSI standard for maximal permissible background sound (ANSI § 3.1–1977).

Speech discrimination should be determined using a standardized measure of speech discrimination ability in quiet at a test presentation level sufficient to ascertain maximum discrimination ability. The speech discrimination measure (test) used, and the level at which testing was done, must be reported.

Hearing tests should be preceded by an otolaryngologic examination and should be performed by or under the supervision of an otolaryngologist or audiologist qualified to perform such tests.

In order to establish an independent medical judgment as to the level of severity in a claimant alleging deafness, the following examinations should be reported: Otolaryngologic examination, pure tone air and bone audiometry, speech reception threshold (SRT), and speech discrimination testing. A copy of reports of medical examination and audiologic evaluations must be submitted.

Cases of alleged "deaf mutism" should be documented by a hearing evaluation. Records obtained from a speech and hearing rehabilitation center or a special school for the deaf may be acceptable, but if these reports are not available, or are found to be inadequate, a current hearing evaluation should be submitted as outlined in the preceding paragraph.

2. *Vertigo associated disturbances of labyrinthine-vestibular function, including Meniere's disease.* These disturbances of balance are characterized by hallucination of motion or loss of position sense and a sensation of dizziness which may be constant or may occur in paroxysmal attacks. Nausea, vomiting, ataxia, and incapacitation are frequently observed, particularly during the acute attack. It is important to differentiate the report of rotary vertigo from that of "dizziness" which is described as light- headedness, unsteadiness, confusion, or syncope.

Meniere's disease is characterized by paroxysmal attacks of vertigo, tinnitus, and fluctuating hearing loss. Remissions are unpredictable and irregular, but may be long-lasting; hence, the severity of impairment is best determined after prolonged observation and serial reexaminations.

The diagnosis of a vestibular disorder requires a comprehensive neuro-otolaryngologic examination with a detailed description of the vertiginous episodes, including notation of frequency, severity, and duration of the attacks. Pure tone and speech audiometry with the appropriate special examinations, such as Bekesy audiometry, are necessary. Vestibular function is assessed by positional and caloric testing, preferably by

electronystagmography. When polytograms, contrast radiography, or other special tests have been performed copies of the reports of these tests should be obtained, in addition to reports of skull and temporal bone x-rays.

3. *Organic loss of speech.* Glossectomy or laryngectomy or cicatricial laryngeal stenosis due to injury or infection results in loss of voice production by normal means. In evaluating organic loss of speech (§ 2.09), ability to produce speech by any means includes the use of mechanical or electronic devices. Impairment of speech due to neurologic disorders should be evaluated under §§ 11.00–11.19.

2.01 CATEGORY OF IMPAIRMENTS, SPECIAL SENSES AND SPEECH

2.02 *Impairment of central visual acuity.* Remaining vision in the better eye after best correction is 20/200 or less.

2.03 *Construction of peripheral visual fields in the better eye.*

A. To 10° or less from the point of fixation; or

B. So the widest diameter subtends an angle no greater than 20°; or

C. To 20 percent or less visual field efficiency.

2.04 *Loss of visual efficiency.* Visual efficiency of better eye after best correction 20 percent or less. (The percent of remaining visual efficiency = the product of the percent of remaining central visual efficiency and the percent of remaining visual field efficiency.)

2.05 *Complete homonymous hemianopsia* (with or without macular sparing). Evaluate under § 2.04.

2.06 *Total bilateral ophthalmoplegia.*

2.07 *Disturbance of labyrinthine-vestibular functions (including Meniere's disease),* characterized by a history of frequent attacks of balance disturbance, tinnitus, and progressive loss of hearing. With both A and B:

A. Disturbed function of vestibular labyrinth demonstrated by caloric or other vestibular tests; and

B. Hearing loss established by audiometry.

2.08 *Hearing impairments* (hearing not restorable by a hearing aid) manifested by:

A. Average hearing threshold sensitivity for air conduction of 90 decibels or greater, and for bone conduction to corresponding maximal levels, in the better ear, determined by the simple average of hearing threshold levels at the three frequencies, 500, 1000, and 2000 hz. (§ 2.00B1); or

B. Speech discrimination scores of 40 percent or less in the better ear.

2.09 *Organic loss of speech* due to:—

Any cause with inability to produce by any means speech which can be heard, understood, and sustained.

TABLE NO. 1.—*Percentage of central visual efficiency corresponding to central visual acuity notations for distance in the phakic and aphakic eye (better eye)*

Snellen		Percent central visual efficiency		
English	Metric	Phakic [1]	Aphakic monocular	Aphakic binocular [3]
20/16	6/5	100	50	75
20/20	6/6	100	50	75
20/25	6/7.5	95	47	71
30/32	6/10	90	45	67
20/40	6/12	85	42	64
20/50	6/15	75	37	56
20/64	6/20	65	32	49
20/80	6/24	60	30	45
20/100	6/30	50	25	37
20/125	6/38	40	20	30
20/160	6/48	30	.....	22
20/200	6/60	20	.....	.....

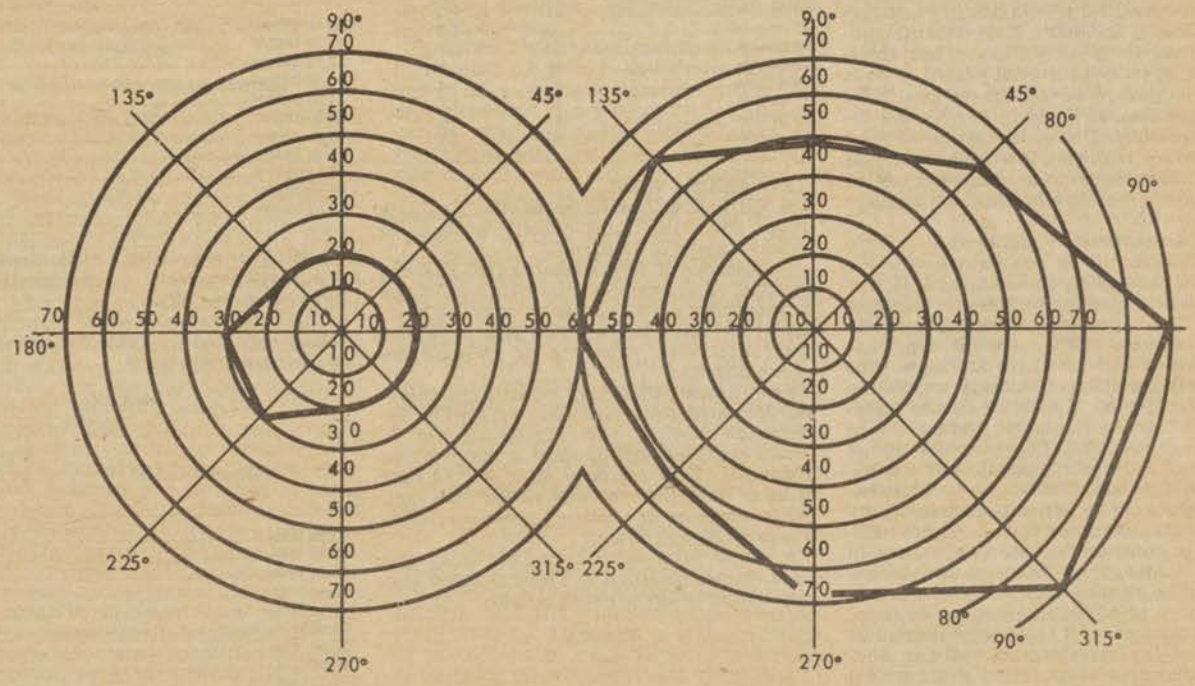
Column and Use

[1] Phakic.—1. A lens is present in both eyes. 2. A lens is present in the better eye and absent in the poorer eye. 3. A lens is present in one eye and the other eye is enucleated.

[2] Monocular.—1. A lens is absent in the better eye and present in the poorer eye. 2. The lenses are absent in both eyes; however, the central visual acuity in the poorer eye after best correction is 20/200 or less. 3. A lens is absent from one eye and the other eye is enucleated.

[3] Binocular.—1. The lenses are absent from both eyes and the central visual acuity in the poorer eye after best correction is greater than 20/200.

TABLE NO. 2.—*Chart of visual field showing extent of normal field and method of computing percent of visual field efficiency*



LEFT EYE (O.S.) RIGHT EYE (O.D.)

1. Diagram of right eye illustrates extent of normal visual field as tested on standard perimeter at 3/300 (3 mm. white disc at a distance of 330 mm.) under 7 foot-candles illumination. The sum of the eight principal meridians of this field total 500°.

2. The percent of visual field efficiency is obtained by adding the number of degrees of the eight principal meridians of the contracted field and dividing by 500. Diagram of left eye illustrates visual field contracted to 30° in the temporal and down and out me-

ridians and to 20° in the remaining six meridians. The percent of visual field efficiency of this field is: $6\times20+2\times30=180\div500=0.36$ or 36 percent remaining visual field efficiency, or 64 percent loss.

3.00 Respiratory System

A. *Causes of impairment:* The impairment produced by respiratory disease usually results from chronic recurrent infection, or from pulmonary insufficiency or a combination of these factors.

B. *Pulmonary tuberculosis will be evaluated* on the basis of the resulting impairment to pulmonary function. Evidence of infectious or active pulmonary tuberculosis such as positive cultures, increasing lesions, or cavitation is not, by itself, a basis for determining that an individual has a severe impairment which is expected to last 12 months. However, if these factors are abnormally persistent, they should not be ignored. For example, in those unusual cases where there is evidence of persistence of pulmonary infection caused by mycobacteria for a period closely approaching 12 consecutive months, the clinical findings, complications, treatment considerations, and prognosis must be carefully assessed to determine whether, despite the absence of impairment of pulmonary function, the individual has a severe impairment that can be expected to last for 12 consecutive months.

C. *When a respiratory impairment is episodic in nature,* as may occur in complications of bronchiectasis and asthmatic bronchitis, the frequency of severe episodes despite prescribed treatment is the criterion for determining the level of impairment. Documentation for episodic asthma should include the hospital or emergency room records indicating the dates of treatment, clinical findings on presentation, what treatment was given and for what period of time, and the clinical response. Severe attacks of episodic asthma, as listed in § 3.03B, are defined as prolonged episodes lasting at least several hours, requiring intensive treatment such as intravenous drug administration or inhalation therapy in a hospital or emergency room.

D. *Documentation of pulmonary insufficiency.* The results of ventilatory function studies for evaluation under tables I, II, and IV should be expressed in liters or liters per minute. The reported 1 second forced expiratory volume (FEV_1) should represent the largest of at least three attempts. One satisfactory maximum voluntary ventilation (MVV) is sufficient. The MVV should represent the observed value and should not be calculated from FEV_1. These studies should be repeated after administration of a nebulized bronchodilator unless the prebronchodilator values are 80 percent or more of predicted normal values or the use of bronchodilators is contraindicated. The values in tables I, II, and IV assume that the ventilatory function studies were not performed in the presence of wheezing or other evidence of bronchospasm or, if these were present at the time of the examination, that the studies were repeated after administration of a bronchodilator. Ventilatory function studies performed in the presence of bronchospasm, without use of bronchodilators, cannot be found to meet the requisite level of severity in tables I, II, and IV.

The appropriately labeled spirometric tracing, showing distance per second on the abscissa and the distance per liter on the ordinate, must be incorporated in the file. The FEV_1 must be recorded at a speed of at least 20 mm. per second. Calculation of the FEV_1 from a flow volume loop is not acceptable. The recording device must provide a volume excursion of at least 10 mm. per liter. The MVV should be represented by the tidal excursions measured over a 10-to-15 second interval. Tracings showing only cumulative volume for the MVV are not acceptable. The height of the individual must be recorded. Studies should not be performed during or soon after an acute respiratory illness. A statement should be made as to the individual's ability to understand the directions, and cooperate in performing the test.

3.01 Category of Impairments, Respiratory

3.02 *Chronic obstructive airway disease (due to any cause).* With spirometric evidence of airway obstruction demonstrated by MVV and FEV_1 both equal to, or less than, the values specified in Table I, corresponding to the person's height.

Table I

Height (inches)	MVV (MBC) equal to or less than	FEV_1 equal to or less than
	L./Min.	L
57 or less	32	1.0
58 or less	33	1.0
59 or less	34	1.0
60 or less	35	1.1
61 or less	36	1.1
62 or less	37	1.1
63 or less	38	1.1
64 or less	39	1.2
65 or less	40	1.2
66 or less	41	1.2
67 or less	42	1.3
68 or less	43	1.3
69 or less	44	1.3
70 or less	45	1.4
71 or less	46	1.4
72 or less	47	1.4
73 or more	48	1.4

3.03 *Asthma.* With:

A. Chronic asthmatic bronchitis. Evaluate under the criteria for chronic obstructive airway disease in § 3.02; or

B. Episodes of severe attacks (see § 3.00C), in spite of prescribed treatment, occurring at least once every 2 months or on an average of at least 6 times a year and prolonged expiration with wheezing or rhonchi between attacks.

3.04 *Diffuse pulmonary fibrosis (sarcoidosis, Hamman-Rich syndrome, idiopathic interstitial fibrosis, and similar diffuse fibroses substantiated by chest X-ray or tissue diagnosis. This category does not include cases of bronchitis or emphysema with incidental scarring or scattered parenchymal fibrosis on X-ray).* With:

A. Total vital capacity equal to, or less than, values specified in Table II below corresponding to the person's height.

Table II

Height (inches)	V.C. equal to or less than (L)
57 or less	1.2
58 or less	1.3
59 or less	1.3
60 or less	1.4

Table II—Continued

Height (inches)	V.C. equal to or less than (L)
61 or less	1.4
62 or less	1.5
63 or less	1.5
64 or less	1.6
65 or less	1.6
66 or less	1.7
67 or less	1.7
68 or less	1.8
69 or less	1.8
70 or less	1.9
71 or less	1.9
72 or less	2.0
73 or more	2.0

or

B. Diffusing capacity of the lungs for carbon monoxide less than 6 ml./mm. Hg./min. (steady-state methods) or lesss than 9 ml./mm. Hg./min. (single-breath methods) or less than 30 percent of predicted normal. (All methods—actual values and predicted normal values for the method used should be reported); or

C. Arterial oxygen tension (pO2) at rest and simultaneously determined arterial carbon dioxide tension (pCO2) equal to, or less than, the values specified in Table III.

Table III

Arterial pCO_2 (mm. Hg)	Arterial pCO_2 equal to or less than (mm. Hg)
30 or below	65
31 or below	64
32 or below	63
33 or below	62
34 or below	61
35 or below	60
36 or below	59
37 or below	58
38 or below	57
39 or below	56
40 or above	55

3.05 *Other restrictive ventilatory disorders (e.g., kyphoscoliosis, thoracoplasty, pulmonary resection).* With:

Total vital capacity equal to, or less than, values specified in Table IV corresponding to the person's height.

Table IV

Height (inches)	V.C. equal to or less than (L.)
59 or less	1.0
60 or less	1.1
61 or less	1.1
62 or less	1.1
63 or less	1.1
64 or less	1.2
65 or less	1.2
66 or less	1.2
67 or less	1.3
68 or less	1.3
69 or less	1.3
70 or less	1.4

3.06 *Pneumoconiosis (demonstrated by X-ray evidence).* With:

A. Nodular or focal fibrosis (non-conglomerative). Evaluate under the criteria for

chronic obstructive airway disease in § 3.02; or

B. Interstitial or disseminated fibrosis or conglomerative disease. Evaluate under the criteria for pulmonary fibrosis in § 3.04; or

C. Where A and B are mixed or cannot be differentiated—evaluate under the criteria in § 3.02 or § 3.04.

3.07 *Bronchiectasis (demonstrated by radio-opaque material).* With:

A. Episodes of acute bronchitis or pneumonia or hemoptysis (more than blood streaked sputum) occuring at least once every 2 months; or

B. Impairment of pulmonary function due to extensive disease should be evaluated under the criteria for chronic obstructive airway disease in § 3.02 or where extensive fibrosis is evident on chest film, under the criteria for pulmonary fibrosis in § 3.04.

3.08 *Pulmonary tuberculosis (caused by M. tuberculosis of pathogenic atypical mycobacteria).* Impairment of pulmonary function due to extensive disease should be evaluated under the criteria in § 3.02, § 3.04, or § 3.05.

3.09 *Mycotic infection of lung.* With:

A. Culture of specific organisms from sputa and serial X-ray evidence of increasing or decreasing extent of lesion, both persisting for at least 3 months despite prescribed therapy; or

B. Culture of specific organisms from sputa and current X-ray evidence of a lesion and episodes of hemoptysis occuring at least once every 2 months; or

C. Impairment of pulmonary function due to exstensive disease should be evaluated under the criteria in § 3.02, § 3.04, or § 3.05.

3.11 *Cor pulmonale.* Evaluate under the criteria for § 4.02D.

3.12 *Pleurocutaneous fistuala.* With persistent purulent drainage.

4.00 Cardiovascular System

A. *Severe cardiac impairment* results from one or more of three consequences of heart disease: (1) congestive heart failure; (2) ischemia (with or without necrosis) of heart muscle; (3) conduction disturbances and-or arrhythmias resulting in cardiac syncope.

With disease of arteries and viens, severe impairment may result from disorders of the vasculature in the central nervous system, eyes, kidneys, extremities, and other organs.

The criteria for evaluating impairment resulting from heart disease or diseases of the blood vessels are based on symptoms, physical signs and pertinent laboratory findings.

B. *Congestive heart failure* is considered in the Listing under one category whatever the etiology (i.e., arteriosclerotic, hypertensive, rheumatic, pulmonary, congential, or other organic heart disease). Congestive heart failure is not considered to have been established for the purpose of § 4.02 unless there is evidence of vascular congestion such as hepatomegaly or peripheral or pulmonary edema which is consistent with the clinical diagnosis. (Radiological description of vascular congestion, unless supported by appropriate clinical evidence, should not be construed as pulmonary edema.) The findings of vascular congestion need not be present at the time of adjudication (except for § 4.02A), but must be causally related to the current episode of severe impairment. The findings other than vascular congestion must be persistent.

Other congestive, ischemic, or restrictive (obstructive) heart disease such as caused by cardiomyopathy or aortic stenosis may result in severe impairment due to congestive heart failure, rhythm disturbances, or ventricular outflow obstruction in the absence of left ventricular enlargement as described in § 4.02B1. However, the ECG criteria as defined in § 4.02B2 should be fulfilled. Clinical findings such as symptoms of dyspnea, fatigue, rhythm disturbances, etc. should be documented and the diagnosis confirmed by echocardiography or at cardiac catheterization.

C. *Hypertensive vascular disease* does not result in severe impairment unless it causes severe damage to one or more of four end organs: heart, brain, kidneys, or eyes (retinae). The presence of such damage must be established by appropriate abnormal physical signs and laboratory findings as specified in § 4.02 or § 4.04, or for the body system involved.

D. *Ischemic heart disease* may result in severe impairment due to chest pain. Description of the pain must contain the clinical characteristics as discussed under § 4.00E. In addition, the clinical impression of chest pain of cardiac origin must be supported by objective evidence as described under § 4.00 F, G, or H.

E. *Chest pain of cardiac origin* is considered to be pain which is precipitated by effort and promptly relieved by sublingual nitroglycerin or rapid-acting nitrates or rest. The character of the pain is classically described as crushing, squeezing, burning, or oppressive pain located in the chest. Excluded is sharp, sticking or rhythmic pain. Pain occurring on exercise should be described specifically as to usual inciting factors (kind and degree), character, location, radiation, duration, and response to nitroglycerin or rest.

So-called "anginal equivalent" locations manifested by pain in the throat, arms, or hands have the same validity as the chest pain described above. Status anginosus and variant angina of the Prinzmetal type (e.g., rest angina with transitory ST elevation on electrocardiogram) will be considered to have the same validity as classical angina pectoris as described above. Shortness of breath as an isolated finding should not be considered as an anginal equivalent.

Chest pain that appears to be of cardiac origin may be caused by noncoronary conditions. Evidence for the latter should be actively considered in determining whether the chest pain is of cardiac origin. Among the more common conditions which may masquerade as angina are gastrointestinal tract lesions such as biliary tract disease, esophagitis, hiatal hernia, peptic ulcer, and pancreatitis; and musculoskeletal lesions such as costochondritis and cervical arthritis.

F. *Documentation of electrocardiography.*

1. *Electrocardiograms obtained at rest* must be submitted in the original or a legible copy of a 12-lead tracing, appropriately labeled, with the standardization inscribed on the tracing. Alteration in standardization of specific leads (such as to accommodate large QRS amplitudes) must be shown on those leads.

The effect of drugs, electrolyte imbalance, etc., should be considered as possible noncoronary causes of ECG abnormalities, especially those involving the ST segment. If needed and available, pre-drug (especially predigitalis) tracings should be obtained.

The term "ischemic" is used in § 4.04 to describe a pathologic ST deviation. Nonspecific repolarization changes should not be confused with ischemic configurations or a current of injury.

Computer interpretations without the original or legible copies of the ECG tracings are not acceptable.

2. *Electrocardiograms obtained in conjunction with exercise tests* must include the original tracings or a legible copy of appropriate leads obtained before, during, and after exercise. Test control tracings, taken before exercise in the upright position, must be obtained. An ECG after 20 seconds of vigorous hyperventilation should be obtained. A tracing should be taken at approximately 5 METs of exercise (treadmill speed of 1.7 miles per hour at a 10 percent grade as in Stage I of the Bruce protocol) and at the time the ECG becomes abnormal according to the criteria in § 4.04A. The time of onset of these abnormal changes must be noted, and the ECG tracing taken at that time should be obtained. Exercise histograms without the original tracings or legible copies are not acceptable.

Whenever electrocardiographically documented stress test data are submitted, irrespective of the type, the standardization must be inscribed on the tracings and the strips must be labeled appropriately, indicating the times recorded. The degree of exercise achieved, the blood pressure levels during the test, and any reason for terminating the test should be included in the report.

G. *Exercise testing.*

1. *When to purchase.* Since the results of a treadmill exercise test are the primary basis for adjudicating claims under § 4.04, they should be included in the file whenever they have been performed. There are also circumstances under which it will be appropriate to purchase exercise tests. Generally, these are limited to claims involving chest pain which is considered to be of cardiac origin but without corroborating ECG or other evidence of ischemic heart disease.

Exercise tests should not be purchased in the absence of alleged chest pain of cardiac origin. Even in the presence of an allegation of chest pain of cardiac origin, an exercise test should not be purchased where full development short of such a purchase reveals that the impairment meets or equals any Listing or the claim can be adjudicated on some other basis.

2. *Methodology.* When an exercise test is purchased, it should be a treadmill type using a continuous progressive multistage regimen (as typified by the Bruce protocol). The targeted heart rate should be not less than 85 percent of the maximum predicted heart rate unless it becomes hazardous to exercise to that heart rate or becomes unnecessary because the ECG meets the criteria in § 4.04A at a lower heart rate. Beyond these requirements, it is prudent to accept the methodolgy of a qualified, competent test facility. In any case, a precise description of the protocol that was followed must be provided.

3. *Limitations of exercise testing.* Exercise testing should not be purchased for individuals who have the following: unstable progressive angina pectoris; congestive heart failure; uncontrolled serious arrhythmias (including uncontrolled auricular fibrillation); second or third-degree heart block; Wolff-Parkinson-White syndrome; uncontrolled severe hypertension; severe aortic stenosis; severe pulmonary hypertension; dissecting or ventricular aneurysms; acute

illness; limiting neurological or musculoskeletal impairments, or for individuals on medication where performance of stress testing may constitute a significant risk.

The presence of noncoronary or nonischemic factors which may influence the ECG response to exercise include hypokalemia, hyperventilation, vasoregulatory asthenia, significant anemia, left bundle branch block, and other heart disease, particularly valvular.

Digitalis may cause ST segment abnormalities at rest, during, and after exercise. Digitalis-related ST depression, present at rest, may become accentuated and result in false interpretations of the ECG taken during or after exercise test.

4. *Evaluation.* Where the evidence includes the results of a treadmill exercise test, this evidence is the primary basis for adjudicating claims under § 4.04. For purposes of the social security disability program, treadmill exercise testing will be evaluated on the basis of the level at which the test becomes positive in accordance with the ECG criteria in § 4.04A. However, the significance of findings of a treadmill exercise test must be considered in light of the clinical course of the disease which may have occurred subsequent to performance of the exercise test. Section 4.04B is not applicable if there is documentation of an acceptable treadmill exercise test. If there is no evidence of a treadmill exercise test or if the test is not acceptable, the criteria in § 4.04B should be used. The level of exercise is considered in terms of multiples of METs (metabolic equivalent units). One MET is the basal O_2 requirement of the body in an inactive state, sitting quietly. It is considered by most authorities to be approximately 3.5 ml O_2/kg/min.

H. *Angiographic evidence.*

1. *Coronary arteriography.* This procedure is not to be purchased by the Social Security Administration. Should the results of such testing be available, the report should be considered as to the quality and kind of data provided and its applicability to the requirements of the Listing of Impairments. A copy of the report of the catheterization and ancillary studies should be obtained. The report should provide information as to the technique used, the method of assessing coronary lumen diameter, and the nature and location of any obstructive lesions.

It is helpful to know the method used, the number of projections, and whether selective engagement of each coronary vessel was satisfactorily accomplished. It is also important to know whether the injected vessel was entirely and uniformly opacified, thus avoiding the artifactual appearance of narrowing or an obstruction.

Coronary artery spasm induced by intracoronary catheterization is not be considered as evidence of ischemic heart disease.

Estimation of the functional significance of an obstructive lesion may also be aided by description of how well the distal part of the vessel is visualized. Some patients with severe proximal coronary atherosclerosis have well-developed large collateral blood supply to the distal vessels without evidence of myocardial damage or ischemia, even under conditions of severe stress.

2. *Left ventriculography.* The report should describe the local contractility of the myocardium as may be evident from areas of hypokinesia, dyskinesia, or akinesia; and the overall contractility of the myocardium as measured by the ejection fraction.

3. *Proximal coronary arteries* (see § 4.04B7) will be considered as the:

a. Right coronary artery proximal to the acute marginal branch;

b. Left anterior descending coronary artery proximal to the first septal perforator; and

c. Left circumflex coronary artery proximal to the first obtuse marginal branch.

I. *Results of other tests.* Information from adequate reports of other tests such as radionuclide studies or echocardiography should be considered where that information is comparable to the requirements in the Listing.

J. *Major surgical procedures.* The amount of function restored and the time required to effect improvement after heart or vascular surgery vary with the nature and extent of the disorder, the type of surgery, and other individual factors. If the criteria described for heart or vascular disease are met, proposed heart or vascular surgery (coronary artery bypass procedure, valve replacement, major arterial grafts, etc.) does not militate against a finding of disability with subsequent assessment of severity postoperatively.

The usual time after surgery for adequate assessment of the results of surgery is considered to be approximately 3 months. Assessment of the severity of the impairment following surgery requires adequate documentation of the pertinent evaluations and tests performed following surgery, such as an interval history and physical examination, with emphasis on those signs and symptoms which might have changed postoperatively, as well as X-rays and electrocardiograms. Where treadmill exercise test or angiography have been performed following the surgical procedure, the results of these tests should be obtained.

Documentation of the preoperative evaluation and a description of the surgical procedure are also required. The evidence should be documented from hospital records (catheterization reports, coronary arteriographic reports, etc.) and the operative note.

Implantation of a cardiac pacemaker is not considered a major surgical procedure for purposes of this section.

4.01 Category of Impairments, Cardiovascular System

4.02 *Congestive heart failure (manifested by evidence of vascular congestion such as hepatomegaly, peripheral or pulmonary edema).* With:

A. Persistent congestive heart failure on clinical examination despite prescribed therapy; or

B. Persistent left ventricular enlargement and hypertrophy documented by both:

1. Extension of the cardiac shadow (left ventricle) to the vertebral column on a left lateral chest roentgenogram; and

2. ECG showing QRS duration less than 0.12 second with S_{V_1} plus R_{V_5} (or R_{V_6}) of 35 mm. or greater *and* ST segment depressed more than 0.5 mm. *and* low, diphasic or inverted T waves in leads with tall R waves; or

C. Persistent "mitral" type heart involvement documented by left atrial enlargement shown by double shadow on PA chest roentgenogram (or characteristic distortion of barium-filled esophagus) and either:

1. ECG showing QRS duration less than 0.12 second with S_{V_1} plus R_{V_5} (or R_{V_6}) of 35 mm. or greater *and* ST segment depressed more than 0.5 mm. *and* low, diphasic or inverted T waves in leads with tall R waves; or

2. ECG evidence of right ventricular hypertrophy with R wave of 5.0 mm. or greater in lead V_1 *and* progressive decrease in R/S amplitude from lead V_1 to V_5 or V_6; or

D. Cor pulmonale (non-acute) documented by both:

1. Right ventricular enlargement (or prominence of the right out-flow tract) on chest roentgenogram of fluoroscopy; and

2. ECG evidence of right ventricular hypertrophy with R wave of 5.0 mm. or greater in lead V_1 *and* progressive decrease in R/S amplitude from lead V_1 to V_5 or V_6.

4.03 *Hypertensive vascular disease.* Evaluate under § 4.02 or § 4.04 or under the criteria for the affected body system.

4.04 *Ischemic heart disease with chest pain of cardiac origin as described in § 4.00E.* With:

A. Treadmill exercise test (see § 4.00F and G) demonstrating one of the following at an exercise level of 5 METs or less:

1. Horizontal or down-sloping ischemic depression of the ST segment to 1.0 mm. or greater, clearly discernible in at least two consecutive complexes which are on a level baseline in any lead; or

2. Premature ventricular systoles which are multiform or bidirectional or are sequentially inscribed (3 or more); or

3. ST segment elevation to 3 mm. or greater; or

4. Development of second or third degree heart block; or

B. In the absence of a report of an acceptable treadmill exercise test (see § 4.00G), one of the following:

1. Transmural myocardial infarction exhibiting a QS pattern or a Q wave with amplitude at least 1/3rd of R wave and with a duration of 0.04 second or more. (If these are present in leads III and aVF only, the requisite Q wave findings must be shown, by labelled tracing, to persist on deep inspiration); or

2. Resting ECG findings showing ischemic-type (see § 4.00F1) depression of ST segment to more than 0.5 mm. in either (a) leads I and a VL and V_6 or (b) leads II and III and aVF or (c) leads V_3 through V_6; or

3. Resting ECG findings showing an ischemic configuration or current of injury (see § 4.00D) with ST segment elevation to 2 mm. or more in either (a) leads I and aVL and V_6 or (b) leads II and III and aVF or (c) leads V_3 through V_6; or

4. Resting ECG findings showing symmetrical inversion of T waves to 5.0 mm. or more in any two leads except leads III or aVR or V_1 or V_2; or

5. Inversion of T wave to 1.0 mm. or more in any of leads I, II, aVL, V_2 to V_6 *and* R wave of 5.0 mm. or more in lead aVL *and* R wave greater than S wave in lead aVF; or

6. "Double" Master Two-Step test demonstrating one of the following:

a. Ischemic depression of ST segment to more than 0.5 mm. lasting for at least 0.08 second beyond the J junction and clearly discernible in at least two consecutive complexes which are on a level baseline in any lead; or

b. Development of a second or third degree heart block; or

7. Angiorgraphic evidence (see § 4.00H) (obtained independent of social security disability evaluation) showing one of the following:

a. 50 percent or more narrowing of the left main coronary artery; or

b. 70 percent or more narrowing of a *proximal* coronary artery (see § 4.00H3) (excluding the left main coronary artery); or

c. 50 percent or more narrowing involving a long (greater than 1 cm.) segment of a proximal coronary artery or multiple proximal coronary arteries; or

C. Resting ECG findings showing left bundle branch block as evidenced by QRS duration of 0.12 second or more in leads I, II, or III *and* R peak duration of 0.06 second or more in leads I, aVL, V_5, or V_6, unless there is a coronary angiogram of record which is negative (see criteria in § 4.04B7); or

D. Left ventricular ejection fraction of 30 percent or less measured at cardiac catheterization or by echocardiography.

4.05 *Recurrent arrhythmias* (not due to digitalis toxicity) resulting in uncontrolled repeated episodes of cardiac syncope and documented by resting or ambulatory (Holter) electrocardiography.

4.09 *Myocardiopathies, rheumatic or syphilitic heart disease.* Evaluate under the criteria in § 4.02, § 4.04, § 4.05, or § 11.04.

4.11 *Aneurysm of aorta or major branches* (demonstrated by roentgenographic evidence). With:

A. Acute or chronic dissection not controlled by prescribed medical or surgical treatment; or

B. Congestive heart failure as described under the criteria in § 4.02; or

C. Renal failure as described under the criteria in § 6.02; or

D. Repeated syncopal episodes.

4.12 *Chronic venous insufficiency* of the lower extremity with incompetency or obstruction of the deep venous return, associated with superficial varicosities, extensive brawny edema, stasis dermatitis, and recurrent or persistent ulceration which has not healed following at least 3 months of prescribed medical or surgical therapy.

4.13 *Arteriosclerosis obliterans or thrombo-angiitis.* With:

A. Intermittent claudication with failure to visualize (on arteriogram obtained independent of social security disability evaluation) the common femoral or deep femoral artery in one extremity; or

B. Intermittent claudication and absence of peripheral arterial pulsations in the femoral, popliteal, dorsalis pedis, and posterior tibial arteries by Doppler or plethysmography, in one extremity; or

C. Amputation at or above the tarsal region due to peripheral vascular disease.

5.00 Digestive System

A. *Disorders of the digestive system* which result in severe impairment usually do so because of interference with nutrition, multiple recurrent inflammatory lesions, or complications of disease, such as fistulae, abscesses, or recurrent obstruction. Such complications usually respond to treatment. These complications must be shown to persist on repeated examinations despite therapy for a reasonable presumption to be made that severe impairment will last for a continuous period of at least 12 months.

B. *Malnutrition or weight loss from gastrointestinal disorders.* When the primary disorder of the digestive tract has been established (e.g., enterocolitis, chronic pancreatitis, postgastrointestinal resection, or esophageal stricture, stenosis, or obstruction), the resultant interference with nutrition will be considered under the criteria in § 5.08. This will apply whether the weight loss is due to primary or secondary disorders, of malabsorption, malassimilation, or obstruction. However, weight loss not due to diseases of the digestive tract, but associated with psychiatric or primary endocrine or other disorders, should be evaluated under the appropriate criteria for the underlying disorder.

C. *Surgical diversion of the intestinal tract,* including colostomy or ileostomy, are not listed since they do not represent impairments which preclude all work activity if the individual is able to maintain adequate nutrition and function of the stoma. Dumping syndrome which may follow gastric resection rarely represents a severe impairment which would continue for 12 months. Peptic ulcer disease with recurrent ulceration after definitive surgery ordinarily responds to treatment. A recurrent ulcer after definitive surgery must be demonstrated on repeated upper gastrointestinal roentgenograms or gastroscopic examinations despite therapy to be considered a severe impairment which will last for at least 12 months. Definitive surgical procedures are those designed to control the ulcer disease process (i.e., vagotomy and pyloroplasty, subtotal gastrectomy, etc.). Simple closure of a perforated ulcer does not constitute definitive surgical therapy for peptic ulcer disease.

5.01 Category of Impairments, Digestive System

5.02 *Recurrent upper gastrointestinal hemorrhage from undetermined cause.* With anemia manifested by hematocrit of 30 percent or less on repeated examinations.

5.03 *Stricture, stenosis, or obstruction of the esophagus (demonstrated by X-ray or endoscopy).* With weight loss as described under § 5.08.

5.04 *Peptic ulcer disease (demonstrated by X-ray or endoscopy).* With:

A. Recurrent ulceration after definitive surgery persistent despite therapy; or

B. Inoperable fistula formation; or

C. Recurrent obstruction demonstrated by X-ray or endoscopy; or

D. Weight loss as described under § 5.08.

5.05 *Chronic liver disease (e.g., portal, postnecrotic, or biliary cirrhosis; chronic active hepatitis; Wilson's disease).* With:

A. Esophageal varices (demonstrated by X-ray or endoscopy) with a documented history of massive hemorrhage attributable to these varices; or

B. Performance of a shunt operation for esophageal varices; or

C. Serum bilirubin of 2.5 mg. per deciliter (100 ml.) or greater persisting on repeated examination for at least 5 months; or

D. Hepatic encephalopathy. Evaluate under the criteria in § 12.02; or

E. Confirmation of chronic liver disease by liver biopsy (obtained independent of social security disability evaluation) and one of the following:

1. Ascites not attributable to other causes, recurrent or persisting for at least 3 months, demonstrated by abdominal paracentesis or associated with persistent hypoalbuminemia of 3.0 gm. per deciliter (100 ml.) or less.

2. Serum bilirubin of 2.5 mg. per deciliter (100 ml.) or greater on repeated examinations.

3. Hepatic cell necrosis or inflammation, persisting for at least 3 months, documented by repeated abnormalities of prothrombin time and enzymes indicative of hepatic dysfunction.

5.06 *Chronic ulcerative or granulomatous colitis (demonstrated by endoscopy, barium enema, biopsy, or operative findings).* With:

A. Recurrent bloody stools documented on repeated examination and anemia manifested by hematocrit of 30 percent or less on repeated examinations; or

B. Persistent or recurrent systemic manifestations, such as arthritis, iritis, fever, or liver dysfunction, not attributable to other causes; or

C. Intermittent obstruction due to intractable abscess, fistula formation, or stenosis; or

D. Recurrences of findings of A, B, or C above after total colectomy; or

E. Weight loss as described under § 5.08.

5.07 *Regional enteritis (demonstrated by operative findings, barium studies, biopsy, or endoscopy).* With:

A. Persistent or recurrent intestinal obstruction evidenced by abdominal pain, distention, nausea, and vomiting and accompanied by stenotic areas of small bowel with proximal intestinal dilation; or

B. Persistent or recurrent systemic manifestations such as arthritis, iritis, fever, or liver dysfunction, not attributable to other causes; or

C. Intermittent obstruction due to intractable abscess or fistula formation; or

D. Weight loss as described under § 5.08.

5.08 *Weight loss (due to any gastrointestinal disorder).* With:

A. Weight equal to or less than the values specified in table I or II; or

B. Weight equal to or less than the values specified in table III or IV and one of the following abnormal findings on repeated examinations:

1. Serum albumin of 3.0 gm. per deciliter (100 ml.) or less; or

2. Hematocrit of 30 percent or less; or

3. Serum calcium of 8.0 mg. per deciliter (100 ml.) (4.0 mEq./L) or less; or

4. Uncontrolled diabetes mellitus due to pancreatic dysfunction with repeated hyperglycemia, hypoglycemia, or ketosis; or

5. Fat in stool of 7 gm. or greater per 24-hour stool specimen; or

6. Nitrogen in stool of 3 gm. or greater per 24-hour specimen; or

7. Persistent or recurrent ascites or edema not attributable to other causes.

Tables of weight reflecting malnutrition scaled according to height and sex—To be used only in connection with § 5.08.

Table I.—*Men*

Height (inches) [1]	Weight (pounds)
61	90
62	92
63	94
64	97
65	99
66	102
67	106
68	109
69	112
70	115
71	118
72	122
73	125
74	128
75	131
76	134

TABLE II.—*Women*

Height (inches) [1]	Weight (pounds)
58	77
59	79
60	82
61	84
62	86
63	89
64	91
65	94
66	98
67	101
68	104
69	107
70	110
71	114
72	117
73	120

TABLE III.—*Men*

Height (inches) [1]	Weight (pounds)
61	95
62	98
63	100
64	103
65	106
66	109
67	112
68	116
69	119
70	122
71	126
72	129
73	133
74	136
75	139
76	143

TABLE IV.—*Women*

Height (inches) [1]	Weight (pounds)
58	82
59	84
60	87
61	89
62	92
63	94
64	97
65	100
66	104
67	107
68	111
69	114
70	117
71	121
72	124
73	128

[1] Height measured without shoes.

6.00 GENITO-URINARY SYSTEM

A. *Determination of the presence of chronic renal disease will be based upon:*

(1) a history, physical examination, and laboratory evidence of renal disease, and

(2) indications of its progressive nature or laboratory evidence of deterioration of renal function.

B. *Nephrotic Syndrome.* The medical evidence establishing the clinical diagnosis must include the description of extent of tissue edema, including pretibial, periorbital, or presacral edema. The presence of ascites, pleural effusion, pericardial effusion, and hydroarthrosis should be described if present. Results of pertinent laboratory tests must be provided. If a renal biopsy has been performed the evidence should include a copy of the report of microscopic examination of the specimen. Complications such as severe orthostatic hypotension, recurrent infections or venous thromboses should be evaluated on the basis of resultant impairment.

C. *Hemodialysis, peritoneal dialysis, and kidney transplantation.* When an individual is undergoing periodic dialysis because of chronic renal disease, severity of impairment is reflected by the renal function prior to the institution of dialysis.

The amount of function restored and the time required to effect improvement in an individual treated by renal transplant depend upon various factors, including adequacy of post-transplant renal function, incidence and severity of renal infection, occurrence of rejection crisis, the presence of systemic complications (anemia, neuropathy, etc.), and side effects of corticosteroids or immuno-suppressive agents. A convalescent period of at least 12 months is required before it can be reasonably determined whether the individual has reached a point of stable medical improvement.

D. *Evaluate associated disorders and complications* according to the appropriate body system Listing.

6.01 CATEGORY OF IMPAIRMENTS, GENITO-URINARY SYSTEM

6.02 *Impairment of renal function, due to any chronic renal disease expected to last 12 months (e.g., hypertensive vascular disease, chronic nephritis, nephrolithiasis, polycystic disease, bilateral hydronephrosis, etc.).* With:

A. Chronic hemodialysis or peritoneal dialysis necessitated by irreversible renal failure; or

B. Kidney transplant. Consider under a disability for 12 months following surgery; thereafter, evaluate the residual impairment (see § 6.00C); or

C. Persistent elevation of serum creatinine to 4 mg. per deciliter (100 ml.) or greater or reduction of creatinine clearance to 20 ml. per minute (29 liters/24 hours) or less, over at least 3 months, with one of the following:

1. Renal osteodystrophy manifested by severe bone pain and appropriate radiographic abnormalities (e.g., osteitis fibrosa, severe osteoporosis, pathologic fractures); or

2. A clinical episode of pericarditis; or

3. Persistent motor of sensory neuropathy; or

4. Intractable pruritus; or

5. Persistent fluid overload syndrome resulting in diastolic hypertension (110 mm. or above) or signs of vascular congestion; or

6. Persistent anorexia with recent weight loss and current weight meeting the values in § 5.08, Table III or IV; or

7. Persistent hematocrits of 30 percent or less.

6.06 *Nephrotic syndrome, with severe anasarca, persistent for at least 3 months despite prescribed therapy.* With:

A. Serum albumin of 3.0 gm. per deciliter (100 ml.) or less *and* proteinuria of 3.5 gm. per 24 hours or greater or

B. Proteinuria of 10.0 gm. per 24 hours or greater.

7.00 HEMIC AND LYMPHATIC SYSTEM

A. *Impairment caused by anemia* should be evaluated according to the ability of the individual to adjust to the reduced oxygen-carrying capacity of the blood. A gradual reduction in red cell mass, even to very low values, is often well tolerated in individuals with a healthy cardiovascular system.

B. *Chronicity is indicated by* persistence of the condition for at least 3 months. The laboratory findings cited must reflect the values reported on more than one examination over that 3-month period.

C. *Sickle cell disease* refers to a chronic hemolytic anemia associated with sickle cell hemoglobin, either homozygous or in combination with thalassemia or with another abnormal hemoglobin (such as C or F).

Appropriate hematologic evidence for sickle cell disease, such as hemoglobin electrophoresis, must be included. Vaso-occlusive or aplastic episodes should be documented by description of severity, freguency, and duration.

Major visceral episodes include meningitis, osteomyelitis, pulmonary infections or infarctions, cerebrovascular accidents, congestive heart failure, genito-urinary involvement, etc.

D. *Coagulation defects.* Chronic inherited coagulation disorders must be documented by appropriate laboratory evidence. Prophylactic therapy such as with anti-hemophilic globulin (AHG) concentrate does not in itself imply severity.

E. *Acute leukemia.* Initial diagnosis of acute leukemia must be based upon definitive bone marrow pathologic evidence. Recurrent disease may be documented by peripheral blood, bone marrow, or cerebrospinal fluid examination. The pathology report must be included.

Section 7.11 contains the designated duration of disability implicit in the finding of a listed impairment. Following the designated time period, a documented diagnosis itself is no longer sufficient to establish a severe impairment. The severity of any remaining impairment must be evaluated on the basis of the medical evidence.

7.01 CATEGORY OF IMPAIRMENTS, HEMIC AND LYMPHATIC SYSTEM

7.02 *Chronic anemia (hematocrit persisting at 30 percent or less due to any cause).*

A. Evaluate the resulting impairment under criteria for the affected body system; or

B. Requiring one or more blood transfusions on an average of at least once every 2 months.

7.05 *Sickle cell disease, or one of its variants.* With:

A. Documented painful (thrombotic) crises occurring at least three times during the 5 months prior to, or

B. Requiring extended hospitalization (beyond emergency care) at least three times during the 12 months adjudication; or

C. Evaluate the resulting impairment under the criteria for the affected body system.

7.06 *Chronic thrombocytopenia (due to any cause).* With platelet counts repeatedly below 40,000/cubic millimeter. With:

A. At least one spontaneous hemorrhage, requiring transfusion, within 5 months prior to adjudication; or

B. Intracranial bleeding within 12 months prior to adjudication.

7.07 *Hereditary telangiectasia.* With hemorrhage requiring transfusion at least three times during the 5 months prior to adjudication.

7.08 *Coagulation defects (nemophilia or a similar disorder).* With spontaneous hemor-

rhage requiring transfusion at least three times during the 5 months prior to adjuication.

7.09 *Polycythemia vera (with erythrocytosis, splenomegaly, and leukocytosis or thrombocytosis).* Evaluate the resulting impairment under the criteria for the affected body system.

7.10 *Myelofibrosis (myeloproliferative syndrome).* With:

A. Chronic anemia. Evaluate according to the criteria of §7.02; or

B. Documented recurrent systemic bacterial infections, occurring at least 3 times during the 5 months prior to adjudication; or

C. Intractable bone pain with radiologic evidence of osteosclerosis.

7.11 *Actue leukemia.* Consider under a disability for 2½ years from the time of initial diagnosis.

7.12 *Chronic leukemia.* Evaluate according to the criteria of § 7.02, § 7.06, § 7.10B, or § 13.06A.

7.13 *Lymphomas.* Evaluate under the criteria in § 13.06A.

7.14 *Macroglobulinemia or heavy chain disease,* confirmed by serum or urine protein electrophoresis or immunoelectrophoresis. Evaluate impairment under criteria for affected body system or under § 7.02, § 7.06, or § 7.08.

7.15 *Chronic granulocytopenia (due to any cause).* With both A and B:

A. Absolute neutrophil counts repeatedly below 1,000 cells/cubic millimeter; and

B. Documented recurrent systemic bacterial infections occurring at least 3 times during the 5 months prior to adjudication.

7.16 *Myeloma (confirmed by appropriate serum or urine protein electrophoresis and bone marrow findings).* With:

A. Radiologic evidence of bony involvement with intractable bone pain or pathological fracture; or

B. Evidence of renal impairment as described in § 6.02; or

C. Hypercalcemia with serum calcium levels persistently greater than 11 mg. per deciliter (100 ml.) for at least one month despite prescribed therapy; or

D. Plasma cells (100 or more cells/cubic millimeter) in the peripheral blood.

8.00 Skin

A. *Skin lesions* may result in severe, long-lasting impairment if they involve extensive body areas or critical areas such as the hands or feet and become resistant to treatment. These lesions must be shown to have persisted for a sufficient period of time despite therapy for a reasonable presumption to be made that severe impairment will last for a continuous period of at least 12 months. The treatment for some of the skin diseases listed in this section may require the use of high dosage of drugs with possible serious side effects; these side effects should be considered in the overall evaluation of impairment.

B. *When skin lesions are associated with systemic disease* and where that is the predominant problem, evaluation should occur according to the criteria in the appropriate section. Disseminated (systemic) lupus erythematosus and scleroderma usually involve more than one body system and should be evaluated under § 10.04 and § 10.05. Neoplastic skin lesions should be evaluated under § 13.00ff. When skin lesions (including burns) are associated with contractures or limitation of joint motion, that impairment should be evaluated under § 1.00ff.

8.01 Category of Impairments, Skin

8.02 *Exfoliative dermatitis, ichthyosis, ichthyosiform erythroderma.* With extensive lesions not responding to prescribed treatment.

8.03 *Pemphigus, erythema multiforme bullosum, bullous pemphigoid, dermatitis herpetiformis.* With extensive lesions not responding to prescribed treatment.

8.04 *Deep mycotic infections.* With extensive fungating, ulcerating lesions not responding to prescribed treatment.

8.05 *Psoriasis, atopic dermatitis, dyshidrosis.* With extensive lesions, including involvement of the hands or feet which impose a severe limitation of function and which are not responding to prescribed treatment.

8.06 *Hydradenitis suppurative, acne conglobata.* With extensive lesions involving the axillae or perineum not responding to prescribed medical treatment and not amenable to surgical treatment.

9.00 Endocrine System

Cause of impairment. Impairment is caused by overproduction or underproduction of hormones, resulting in structural or functional changes in the body. Where involvement of other organ systems has occurred as a result of a primary endocrine disorder, these impairments should be evaluated according to the criteria under the appropriate sections.

9.01 Category of Impairments, Endocrine

9.02 *Thyroid Disorders.* With:

A. Progressive exophthalmos as measured by exophthalmometry; or

B. Evaluate the resulting impairment under the criteria for the affected body system.

9.03 *Hyperparathyroidism.* With:

A. Generalized decalcification of bone on X-ray study and elevation of plasma calcium to 11 mg. per deciliter (100 ml.) or greater; or

B. Evaluate the resulting impairment according to the Listing under the affected body system.

9.04 *Hypoparathyroidism.* With:

A. Severe recurrent tetany; or

B. Recurrent generalized convulsions; or

C. Evaluate lenticular cataracts under the criteria in § 2.00ff.

9.05 *Neurohypophyseal insufficiency (diabetes insipidus).* With urine specific gravity of 1.005 or below, persistent for at least 3 months and recurrent dehydration.

9.06 *Hyperfunction of the adrenal cortex.* Evaluate the resulting impairment under the criteria for the affected body system.

9.08 *Diabetes mellitus.* With:

A. Neuropathy demonstrated by significant and persistent disorganization of motor function in two extremities resulting in sustained disturbance of gross and dexterous movements, or gait, and station (see § 11.00C); or

B. Acidosis occurring at least on the average of once every 2 months documented by appropriate blood chemical tests (pH or pCO_2 or bicarbonate levels); or

C. Amputation at, or above, the tarsal region due to diabetic necrosis or peripheral vascular disease; or

D. Retinitis proliferans; evaluate the visual impairment under the criteria in § 2.02, § 2.03, or § 2.04.

10.00 Multiple Body Systems

A. The impairments included in this section usually involve more than a single body system.

B. Long-term obesity will usually be associated with disorders in the musculoskeletal, cardiovascular, peripheral vascular, and pulmonary systems and the advent of such disorders is the major cause of impairment. Extreme obesity results in restrictions imposed by body weight and the additional restrictions imposed by disturbances in other body systems.

10.01 Category of Impairments, Multiple Body Systems

10.02 *Hansen's disease (leprosy).* As active disease or consider as "under a disability" while hospitalized.

10.03 *Polyarteritis or periarteritis nodosa (established by biopsy).* With signs of generalized arterial involvement.

10.04 *Disseminated lupus erythematosus (established by a positive LE preparation or biopsy or positive ANA test).* With frequent exacerbations demonstrating involvement of renal or cardiac or pulmonary or gastrointestinal or central nervous systems.

10.05 *Scleroderma or progessive systemic sclerosis (the diffuse or generalized form).* With:

A. Advanced limitation of use of hands due to sclerodactylia or limitation in other joints; or

B. Significant visceral manifestations of digestive, cardiac, or pulmonary impairment.

10.10 *Obesity.* Weight equal to or greater than the values specified in table I for males, table II for females (100 percent above desired level) and one of the following:

A. History of pain and limitation of motion in any weight bearing joint or spine (on physical examination) associated with X-ray evidence of arthritis in a weight bearing joint or spine; or

B. Hypertension with diastolic blood pressure persistently in excess of 100 mm Hg measured with appropriate size cuff; or

C. History of congestive heart failure manifested by past evidence of vascular congestion such as hepatomegaly, peripheral or pulmonary edema; or

D. Chronic venous insufficiency with superficial varicosities in a lower extremity with pain on weight bearing and persistent edema; or

E. Respiratory disease with total forced vital capacity equal to or less than 2.0 L. or a level of hypoxemia at rest equal to or less than the values of the following table:

Arterial pCO_2 (mm Hg)	Arterial pO_2 equal to or less than (mm Hg)
30 or below	65
31 or below	64
32 or below	63
33 or below	62
34 or below	61
35 or below	60
36 or below	59
37 or below	58
38 or below	57
39 or below	56
40 or below	55

TABLE I.—*Men*

Height (inches)	Weight (pounds)
60	246
61	252
62	258
63	264
64	270
65	276
66	284
67	294
68	302
69	310
70	318
71	328
72	336
73	346
74	356
75	364
76	374

TABLE II.—*Women*

Height (inches)	Weight (pounds)
56	208
57	212
58	218
59	224
60	230
61	236
62	242
63	250
64	258
65	266
66	274
67	282
68	290
69	298
70	306
71	314
72	322

11.00 NEUROLOGICAL

A. *Convulsive disorders.* In convulsive disorders, regardless of etiology, severity will be determined according to type, frequency, duration, and sequelae of seizures. At least one detailed description of a typical seizure is required. Such description includes the presence or absence of aura, tongue bites, sphincter control, injuries associated with the attack, and postictal phenomena. The reporting physician should indicate the extent to which description of seizures reflects his own observations and the source of ancillary information. Testimony of persons other than the claimant is essential for description of type and frequency of seizures if professional observation is not available.

Documentation of epilepsy should include at least one electroencephalogram (EEG).

Under § 11.02 and § 11.03, a severe impairment is considered present only if it persists despite the fact that the individual is following prescribed anticonvulsive treatment. Adherence to prescribed anticonvulsant therapy can ordinarily be determined from objective clinical findings in the report of the physician currently providing treatment for epilepsy. Determination of blood levels of phenytoin sodium or other anticonvulsive drugs may serve to indicate whether the prescribed medication is being taken. Should serum drug levels appear therapeutically inadequate, consideration should be given as to whether this is caused by individual idiosyncrasy in absorption or metabolism of the drug. Where adequate seizure control is obtained only with unusually large doses, the possibility of impairment resulting from the side effects of this medication must also be assessed. Where documentation shows that use of alcohol or drugs affects adherence to prescribed therapy or may play a part in the precipitation of seizures, this must also be considered in the overall assessment of impairment severity.

B. *Brain tumors.* The diagnosis of malignant brain tumor should be established under the criteria described in § 13.00B for neoplastic disease.

In histologically malignant tumors, the pathological diagnosis alone will be the decisive criterion for severity and expected duration (§ 11.05A). In cases of benign tumors (§ 11.05B) the severity and duration of the impairment will be determined on the bases of the symptoms, signs, and pertinent laboratory findings.

C. *Persistent disorganization of motor function* in the form of paresis or paralysis, tremor or other involuntary movements, ataxia and sensory disturbances (any or all of which may be due to cerebral, cerebellar, brain stem, spinal cord, or peripheral nerve dysfunction) which occur singly or in various combinations, frequently provides the sole or partial basis for decision in cases of neurological impairment. The assessment of impairment depends on the degree of interference with locomotion and/or interference with the use of fingers, hands, and arms.

D. *In conditions which are episodic in character,* such as multiple sclerosis or myasthenia gravis, consideration should be given to frequency and duration of exacerbations, length of remissions, and permanent residuals.

11.01 CATEGORY OF IMPAIRMENTS, NEUROLOGICAL

11.02 *Epilepsy—major motor seizures, (grand mal or psychomotor), documented by EEG and by detailed description of a typical seizure pattern, including all associated phenomena; occurring more frequently than once a month, in spite of at least 3 months of prescribed treatment.* With:

A. Diurnal episodes (loss of consciousness and convulsive seizures); or

B. Nocturnal episodes manifesting residuals which interfere significantly with activity during the day.

11.03 *Epilepsy—minor motor seizures (petit mal, psychomotor, or focal), documented by EEG and by detailed description of a typical seizure pattern, including all associated phenomena; occurring more frequently than once weekly in spite of at least 3 months of prescribed treatment.* With alteration of awareness or loss of consciousness and transient postictal manifestations of unconventional behavior or significant interference with activity during the day.

11.04 *Central nervous system vascular accident.* With one of the following more than 3 months post-vascular accident:

A. Sensory or motor aphasia resulting in ineffective speech or communication; or

B. Significant and persistent disorganization of motor function in two extremities, resulting in sustained disturbance of gross and dexterous movements, or gait, and station (see § 11.00C).

11.05 *Brain tumors.*

A. Malignant gliomas (astrocytoma—grades III and IV, glioblastoma multiforme), medulloblastoma, ependymoblastoma, or primary sarcoma; or

B. Astrocytoma (grades I and II), meningioma, pituitary tumors, oligodendroglioma, ependymoma, clivus chordoma, and benign tumors. Evaluate under § 11.02, § 11.03, § 11.04 A, or B, or § 12.02.

11.06 *Parkinsonian syndrome.* With the following signs: Significant rigidity, brady kinesia, or tremor in two extremities, which singly or in combination, result in sustained disturbance of gross and dexterous movements, or gait and station.

11.07 *Cerebral palsy.* With:

A. IQ of 69 or less; or

B. Abnormal behavior patterns, such as destructiveness or emotional instability; or

C. Significant interference in communication due to speech, hearing, or visual defect; or

D. Disorganization of motor function as described in § 11.04B.

11.08 *Spinal cord or nerve root lesions, due to any cause.* With disorganization of motor function as described in § 11.04B.

11.09 *Multiple sclerosis.* With:

A. Disorganization of motor function as described in § 11.04B; or

B. Visual or mental impairment as described under the criteria in § 2.02, § 2.03, § 2.04, or § 12.02.

11.10 *Amyotrophic lateral sclerosis.* With:

A. Significant bulbar signs; or

B. Disorganization of motor function as described in § 11.04B.

11.11 *Anterior poliomyelitis.* With:

A. Presistent difficulty with swallowing or breathing; or

B. Unintelligible speech; or

C. Disorganization of motor function as described in § 11.04B.

11.12 *Myasthenia gravis.* With:

A. Significant difficulty with speaking, swallowing, or breathing while on prescribed therapy; or

B. Significant motor weakness of muscles of extremities on repetitive activity against resistance while on prescribed therapy.

11.13 *Muscular dystrophy.* With disorganization of motor function as described in § 11.04B.

11.14 *Peripheral neuropathies.* With disorganization of motor function as described in § 11.04B, in spite of prescribed treatment.

11.15 *Tabes dorsalis.* With:

A. Tabetic crises occurring more frequently than once monthly; or

B. Unsteady, broad-based or ataxic gait causing significant restriction of mobility substantiated by appropriate posterior column signs.

11.16 *Subacute combined cord degeneration (pernicious anemia).* With disorganization of motor function as described in § 11.04B or § 11.15B, not significantly improved by prescribed treatment.

11.17 *Degenerative disease not listed elsewhere, such as Huntington's chorea, Friedreich's ataxia, and spino-cerebellar degeneration.* With:

A. Disorganization of motor function as described in § 11.04B or § 11.15B; or

B. Chronic brain syndrome. Evaluate under 12.02.

11.18 *Cerebral trauma:* Evaluate under the provisions of § 11.02, § 11.03, § 11.04, and § 12.02, as applicable.

11.19 *Syringomyelia.* With:

A. Significant bulbar signs; or

B. Disorganization of motor function as described in § 11.04B.

12.00 Mental Disorders

A. *Introduction:* The evaluation of disability applications on the basis of mental disorders requires consideration of the nature and clinical manifestations of the medically determinable impairment(s) as well as consideration of the degree of limitation such impairment(s) may impose on the individual's ability to work, as reflected by (1) daily activities both in the occupational and social spheres; (2) range of interest; (3) ability to take care of personal needs; and (4) ability to relate to others. This evaluation must be based on medical evidence consisting of demonstrable clinical signs (medically demonstrable phenomena, apart from the individual's symptoms, which indicate specific abnormalities of behavior, affect, thought, memory, orientation, or contact with reality) and laboratory findings (including psychological tests) relevant to such issues as restriction of daily activities, constriction of interests, deterioration of personal habits (including personal hygiene), and impaired ability to relate to others.

The severity and duration of mental impairment(s) should be evaluated on the basis of reports from psychiatrists, psychologists, and hospitals, in conjunction with adequate descriptions of daily activites from these or other sources. Since confinement in an institution may occur because of legal or social requirements, confinement per se does not establish that impairment is severe. Similarly, release from an institution does not establish improvement. As always, severity and duration of impairment are determined by the medical evidence. A description of the individual's personal appearance and behavior at the time of the examination is also important to the evaluation process.

Diagnosis alone is insufficient as a basis for evaluation of the severity of mental impairment(s). Accordingly, the criteria of severity under mental disorders are arranged in four comprehensive groups; chronic brain syndromes (§ 12.02), functional (nonorganic) psychotic disorders (§ 12.03), functional nonpsychotic disorders (§ 12.04), and mental retardation (§ 12.05). Each category consists of a set of clinical findings, one or more of which must be met, and a set of functional restrictions, all of which must be met. The functional restrictions are to be interpreted in the light of the extent to which they are imposed by psychopathology.

The criteria for severity of mental impairment(s) are so constructed that a decision can be reached even if there are disagreements regarding diagnosis. All available clinical and laboratory evidence must be considered since it is not unusual to find, in the same individual, signs and test results associated with several pathological conditions, mental or physical. For example, an individual might show evidence of depression, chronic brain syndrome, cirrhosis of the liver, etc., in various combinations.

In some cases, the results of well-standardized psychological tests, such as the Wechsler Adult Intelligence Scale (WAIS) and the Minnesota Multiphasic Personality Inventory (MMPI), may contribute to the assessment of severity of impairment. To provide full documentation, the psychological report should include key data on which the report was based, such as MMPI profiles, WAIS subtest scores, etc.

B. *Discussion of Mental Disorders:*

1. *Chronic brain syndromes* (organic brain syndromes) result from persistent, more or less irreversible, diffuse impairment of cerebral tissue function. They are usually permanent and may be progressive. They may be accompanied by psychotic or neurotic behavior superimposed on organic brain pathology. The degree of impairment may range from mild to severe. Acute brain syndromes are temporary and reversible conditions with favorable prognosis and no significant residuals. Occasionally, an acute brain syndrome may progress into a chronic brain syndrome.

2. *Functional psychotic disorders* are characterized by demonstrable mental abnormalities without demonstrable structural changes in brain tissue. Mood disorders (involutional psychosis, manic-depressive illness, psychotic depressive reaction) or thought disorders (schizophrenias and paranoid states) are characterized by varying degrees of personality disorganization and accompanied by a corrresponding degree of inability to maintain contact with reality (e.g., hallucinations, delusions).

3. *Functional nonpsychotic disorders* are likewise characterized by demonstrable mental abnormalities without demonstrable structural changes in brain tissue (psychophysiologic, neurotic, personality and certain other nonpsychotic disorders).

a. *Psychophysiologic (autonomic and visceral) disorders* (e.g., cardiovascular, gastrointestinal, genitourinary, musculoskeletal, respiratory). In these conditions, the normal physiological expression of emotions is exaggerated by chronic emotional tensions, eventually leading to a disruption of the autonomic regulatory system and resulting in various visceral disorders. If the condition persists, it may lead to demonstrable structural changes (e.g., peptic ulcer, bronchial asthma, dermatitis).

b. *Neurotic disorders* (e.g., anxiety, depressive, hysterical, obsessive-compulsive, and phobic neuroses). In these conditions there are no gross falsifications of reality such as observed in the psychoses in the form of hallucinations or delusions. Neuroses are characterized by reactions to deep-seated conflicts and are classified by the defense mechanisms the individual employs to stave off the threat of emotional decompensation (e.g., anxiety, depression, conversion, obsessive-compulsive, or phobic mechanisms). Anxiety or depression occurring in connection with overwhelming external situations (i.e., situational reactions) are self-limited and the symptoms usually recede when the situational stress diminishes.

c. *Other functional nonpsychotic disorders*, including paranoid, cyclothymic, schizoid, explosive, obsessive-compulsive, hysterical, asthenic, antisocial, passive-aggressive, and inadequate personality; sexual deviation; alcohol addiction and drug addiction. These disorders are characterized by deeply ingrained maladaptive patterns of behavior, generally of long duration. Unlike neurotic disorders, conflict in these cases is not primarily within the individual but between the individual and his environment. In many of these conditions, the patient may experience little anxiety and little or no sense of distress, except when anxiety and distress are consequences of maladaptive behavior.

4. *Mental retardation* denotes a lifelong condition characterized by below-average intellectual endowment as measured by well-standardized intelligence (IQ) tests and associated with impairment in one or more of the following areas: learning, maturation, and social adjustment. The degree of impairment should be determined primarily on the basis of intelligence level and the medical report. Care should be taken to ascertain that test results are consistent with daily activities and behavior. A well-standardized, comprehensive intelligence test, such as the Wechsler Adult Intelligence Scale (WAIS), should be administered and interpreted by a psychologist or psychiatrist qualified by training and experience to perform such an evaluation. In special circumstances, nonverbal measures, such as the Raven Progressive Matrices or the Arthur Point Scale, may be substituted.

Unfortunately, identical IQ scores obtained from different tests do not always reflect a similar degree of intellectual function. In this connection, it may be noted that on the WAIS, perhaps currently the most widely used measure of intellectual ability in adults, IQ's of 69 and below are characteristic of approximately the lowest 2 percent of the general population. In instances where other tests are administered, it will be necessary to convert the IQ to the corresponding percentile rank in the general population in order to determine the actual degree of impairment reflected by the IQ scores. Where more than one IQ is customarily derived from the test administered, i.e., where Verbal, Performance, and Full Scale IQ's are provided as on the WAIS, the lowest of these is to be used in conjunction with § 12.05.

In cases where the nature of the individual's impairment is such that testing, as described above, is precluded, medical reports specifically describing the level of intellectual, social, and physical function should be obtained. Actual observations by district office or State DDS personnel, reports from educational institutions, and information furnished by public welfare agencies or other reliable, objective sources should be considered as additional evidence.

12.01 Category of Impairments, Mental

12.02 *Chronic brain syndromes* (organic brain syndromes). With both A and B:

A. Demonstrated deterioration in intellectual functioning, manifested by persistence of one or more of the following clincial signs:

1. Marked memory defect for recent events; or

2. Improverished, slowed, perseverative thinking, with confusion or disorientation; or

3. Labile, shallow, or coarse affect;

B. Resulting persistence of marked restriction of daily activities and constriction of interests and deterioration in personal habits and seriously impaired ability to relate to other people.

12.03 *Functional psychotic disorders* (mood disorders, schizophrenias, paranoid states). With both A and B:

A. Manifested persistence of one or more of the following clinical signs:

1. Depression (or elation); or

2. Agitation; or

3. Psychomotor disturbances; or

4. Hallucinations or delusions; or

5. Autistic or other regressive behavior; or

6. Inappropriateness of affect; or

7. Illogical association of ideas;

B. Resulting persistence of marked restriction of daily activities and constriction of in-

terests and seriously impaired ability to relate to other people.

12.04 *Functional nonpsychotic disorders* (psychophysiologic, neurotic, and personality disorders; addictive dependence on alcohol or drugs). With both A and B:

A. Manifested persistence of one or more of the following clinical signs:

1. Demonstrable and persistent structural changes mediated through psychophysiological channels (e.g., duodenal ulcer); or

2. Recurrent and persistent periods of anxiety, with tension, apprehension, and interference with concentration and memory; or

3. Persistent depressive affect with isomnia, loss of weight, and suicidal preoccupation; or

4. Persistent phobic or obsessive ruminations with inappropriate, bizarre, or disruptive behavior; or

5. Persistent complusive, ritualistic behavior; or

6. Persistent functional disturbance of vision, speech, hearing, or use of a limb with demonstrable structural or trophic changes; or

7. Persistent, deeply ingrained, maladaptive patterns of behavior manifested by either:

a. Seclusiveness or autistic thinking; or

b. Pathologically inappropriate suspiciousness or hostility;

B. Resulting persistence of marked restriction of daily activities and constriction of interests and deterioration in personal habits and seriously impaired ability to relate to other people.

12.05 *Mental retardation.* As manifested by:

A. Severe mental and social incapacity as evidenced by marked dependence upon others for personal needs (e.g., bathing, washing, dressing, etc.) and inability to understand the spoken word and inability to avoid physical danger (fire, cars, etc.) and inability to follow simple directions and inability to read, write, and perform simple calculations; or

B. IQ of 59 or less (see § 12.00B4); or

C. IQ of 60 to 69 inclusive (see § 12.00B4) and a physical or other mental impairment imposing additional and significant work-related limitation of function.

13.00 Neoplastic Disease—Malignant

A. *Introduction:* The determination of the level of severity resulting from malignant tumors is made from a consideration of the site of the lesion, the histogenesis of the tumor, the extent of involvement, the apparent adequacy and response to therapy (surgery, irradiation, hormones, chemotherapy, etc.), and the magnitude of the post-therapeutic residuals.

B. *Documentation:* The diagnosis of malignant tumor should be established on the basis of symptoms, signs, and laboratory findings. The site of the primary, recurrent, and metastatic lesion must be specified in all cases of malignant neoplastic diseases. If an operative procedure has been performed, the evidence should include a copy of the operative note and the report of the gross and microscopic examination of the surgical specimen. If these documents are not obtainable, then the summary of hospitalization or a report from the treating physician must include details of the findings at surgery and the results of the pathologist's gross and microscopic examination of the tissues.

For those cases in which a disabling impairment was not established when therapy was begun but progression of the disease is likely, current medical evidence should include a report of a recent examination directed especially at local or regional recurrence, soft part or skeletal metastases, and significant posttherapeutic residuals.

C. *Evaluation:* Usually, when the malignant tumor consists only of a local lesion with metastasis to the regional lymph nodes which apparently has been completely excised, imminent recurrence or metastasis is not anticipated. Exceptions are noted in §§ 13.02E, 13.03, 13.05B, 13.09 B and E, 13.11 A and F, 13.13B, 13.16 B and C, 13.21B, 13.22 A and B, and 13.24A. For adjudicative purposes, "distant metastasis" or "metastasis beyond the regional lymph nodes" refers to metastasis beyond the lines of the usual radical en bloc resection.

Local or regional recurrence after radical surgery or pathological evidence of incomplete excision by radical surgery is to be equated with unresectable lesions (except for carcinoma of the breast, § 13.09C) and, for the purposes of our program, may be evaluated as "inoperable." These situations are usually followed by severe impairment within 6 months to 1 year.

Local or regional recurrence after incomplete excision of a localized and still completely resectable tumor is not to be equated with recurrence after radical surgery. In the evaluation of lymphomas, the tissue type and site of involvement are not necessarily indicators of the severity of the impairment.

When a malignant tumor has metastasized beyond the regional lymph nodes, the impairment usually will be considered to be severe. Exceptions are hormone-dependent tumors, isotope-sensitive metastases, metastases from seminoma of the testicles which are controlled by definitive therapy or distant metastases which have apparently disappeared and have not been evident for 3 or more years.

D. *Effects of therapy.* Significant posttherapeutic residuals, not specifically included in the category of impairments for malignant neoplasms, should be evaluated according to the affected body system.

Where the impairment is not listed in the Listing of Impairments and is not medically equivalent to a listed impairment, the impact of any residual impairment including that caused by therapy must be considered. The therapeutic regimen and consequent adverse response to therapy may vary widely; therefore, each case must be considered on an individual basis. It is essential to obtain a specific description of the therapeutic regimen, including the drugs given, dosage, frequency of drug administration, and plans for continued drug administration. It is necessary to obtain a description of the complications or any other adverse response to therapy such as nausea, vomiting, diarrhea, weakness, dermatologic disorders, or reactive mental disorders. Since the severity of the adverse effects of anticancer chemotherapy may change during the period of drug administration, the decision regarding the impact of drug therapy should be based on a sufficient period of therapy to permit proper consideration.

E. *Onset.* To establish onset of disability prior to the time a malignancy is first demonstrated to be inoperable of beyond control by other modes of therapy (and prior evidence is nonexistent) requires medical judgment based on medically reported symptoms, the type of the specific malignancy, its location and extent of involvement when first demonstrated.

13.01 Category of Impairments, Neoplastic Diseases—Malignant

13.02 *Head and neck* (except salivary glands—§ 13.07, thyroid gland—§ 13.08, and mandible, maxilla, orbit, or temporal fossa—§ 13.11):

A. Inoperable; or

B. Not controlled by prescribed therapy; or

C. Recurrent after radical surgery or irradiation; or

D. With distant metastasis; or

E. Epidermoid carcinoma occurring in the pyriform sinus or posterior third of the tongue.

13.03 *Sarcoma of skin:*

A. Angiosarcoma with metastasis to regional lymph nodes or beyond; or

B. Mycosis fungoides with lymph node or visceral involvement.

13.04 *Sarcoma of soft parts:* Not controlled by prescribed therapy.

13.05 *Malignant melanoma:*

A. Recurrent after wide excision; or

B. With metastasis to adjacent skin (satellite lesions) or elsewhere.

13.06 *Lymph nodes:*

A. Hodgkin's disease or non-Hodgkin's lymphoma with progressive disease not controlled by prescribed therapy; or

B. Metastatic carcinoma in a lymph node (except for epidermoid carcinoma in a lymph node in the neck) where the primary site is not determined after adequate search; or

C. Epidermoid carcinoma in a lymph node in the neck not responding to prescribed therapy.

13.07 *Salivary glands*—carcinoma or sarcoma with metastasis beyond the regional lymph nodes.

13.08 *Thyroid gland*—carcinoma with metastasis beyond the regional lymph nodes, not controlled by prescribed therapy.

13.09 *Breast:*

A. Inoperable carcinoma; or

B. Inflammatory carcinoma; or

C. Recurrent carcinoma, except local recurrence controlled by prescribed therapy; or

D. Distant metastasis from breast carcinoma (bilateral breast carcinoma, synchronous or metachronus, is usually primary in each breast); or

E. Sarcoma with metastasis anywhere.

13.10 *Skeletal system* (exclusive of the jaw):

A. Malignant primary tumors with evidence of metastases and not controlled by prescribed therapy; or

B. Metastatic carcinoma to bone where the primary site is not determined after adequate search.

13.11 *Mandible, maxilla, orbit, or temporal fossa:*

A. Sarcoma of any type with metastasis; or

B. Carcinoma of the antrum with extension into the orbit or ethmoid or sphenoid sinus, or with regional or distant metastasis; or

C. Orbital tumors with intracranial extension; or

D. Tumors of the temporal fossa with perforation of skull and meningeal involvement; or

E. Adamantinoma with orbital or intracranial infiltration; or

F. Tumors of Rathke's pouch with infiltration of the base of the skull or metastasis.

13.12 *Brain or spinal cord:*

A. Metastatic carcinoma to brain or spinal cord.

B. Evaluate other tumors under the criteria described in § 11.05 and § 11.08.

13.13 *Lungs:*

A. Unresectable; or

B. With metastases; or

C. Recurrent after resection; or

D. Incomplete excision; or

E. Oat cell carcinoma.

13.14 *Pleura or mediastinum:*

A. Malignant mesothelioma of pleura; or

B. Malignant tumors, metastatic to pleura; or

C. Malignant primary tumor of the mediastinum not controlled by prescribed therapy.

13.15 *Abdomen:*

A. Generalized carcinomatosis; or

B. Retroperitoneal cellular sarcoma not controlled by prescribed therapy; or

C. Ascites with demonstrated malignant cells.

13.16 *Esophagus or stomach:*

A. Carcinoma or sarcoma of the upper two-thirds of the esophagus,

B. Carcinoma or sarcoma of the distal one-third of the esophagus with metastasis to the regional lymph nodes or extension to surrounding structures; or

C. Carcinoma of the stomach with metastasis to the regional lymph nodes or extension to surrounding structures; or

D. Sarcoma of stomach not controlled by prescribed therapy; or

E. Inoperable carcinoma; or

F. Recurrence or metastasis after resection.

13.17 *Small intestine:*

A. Carcinoma, sarcoma, or carcinoid tumor with metastasis beyond the regional lymph nodes; or

B. Recurrence of carcinoma, sarcoma, or carcinoid tumor after resection; or

C. Sarcoma, not controlled by prescribed therapy.

13.18 *Large intestine* (from ileocecal valve to and including anal canal)—carcinoma or sarcoma.

A. Unresectable; or

B. Metastasis beyond the regional lymph nodes, or

C. Recurrence or metastasis after resection.

13.19 *Liver or gallbladder:*

A. Primary or metastatic malignant tumors of the liver; or

B. Carcinoma of the gallbladder; or

C. Carcinoma of the bile ducts, unresectable or with metastases.

13.20 *Pancreas:*

A. Carcinoma except islet cell carcinoma; or

B. Islet cell carcinoma which is unresectable and physiologically active.

13.21 *Kidneys, adrenal glands, or ureters*—carcinoma.

A. Unresectable; or

B. With metastasis.

13.22 *Urinary bladder*—carcinoma; With:

A. Infiltration beyond the bladder wall; or

B. Metastasis; or

C. Unresectable; or

D. Recurrence after total cystectomy; or

E. Evaluate urinary diversion after total cystectomy under the criteria in § 6.02.

13.23 *Prostate gland*—carcinoma not controlled by prescribed therapy.

13.24 *Testicles:*

A. Choriocarcinoma; or

B. Other malignant primary tumors with progressive disease not controlled by prescribed therapy.

13.25 *Uterus*—carcinoma or sarcoma (corpus or cervix).

A. Inoperable and not controlled by prescribed therapy; or

B. Recurrent after total hysterectomy; or

C. Total pelvic exenteration.

13.26 *Ovaries:* All malignant primary or recurrent tumors. With:

A. Ascites with demonstrated malignant cells; or

B. Unresectable infiltration; or

C. Unresectable metastasis to omentum or elsewhere in the peritoneal cavity; or

D. Distant metastasis.

13.27 *Leukemia:* Evaluate under the criteria of § 7.00ff, Hemic and Lymphatic System.

13.28 *Uterine (Fallopian) tubes*—carcinoma or sarcoma, unresectable or with metastasis.

[FR Doc. 79-9154 Filed 3-26-79; 8:45 am]

[4210-01-M]

Title 24—Housing and Urban Development

CHAPTER X—FEDERAL INSURANCE ADMINISTRATION, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

SUBCHAPTER B—NATIONAL FLOOD INSURANCE PROGRAM

[Docket No. FI-4600]

PART 1917—APPEALS FROM PROPOSED FLOOD ELEVATION DETERMINATIONS

Final Flood Elevation Determination for the City of Decatur, Morgan County, Ala.

AGENCY: Federal Insurance Administration, HUD.

ACTION: Final rule.

SUMMARY: Final base (100-year) flood elevations are listed below for selected locations in the City of Decatur, Morgan County, Alabama. These base (100-year) flood elevations are the basis for the flood plain management measures that the community is required to either adopt or show evidence of being already in effect in order to qualify or remain qualified for participation in the national flood insurance program (NFIP).

EFFECTIVE DATE: The date of issuance of the flood insurance rate map (FIRM), showing base (100-year) flood elevations, for the City of Decatur, Morgan County, Alabama.

ADDRESS: Maps and other information showing the detailed outlines of the flood-prone areas and the final elevations for the City of Decatur, Morgan County, Alabama are available for review at North Central Alabama Regional Council of Governments, 5th floor, Decatur City Hall, Decatur, Alabama.

FOR FURTHER INFORMATION CONTACT:

Mr. Richard Krimm, Assistant Administrator, Office of Flood Insurance, Room 5270, 451 Seventh Street SW., Washington, D.C. 20410, 202-755-5581 or toll-free line 800-424-8872.

SUPPLEMENTARY INFORMATION: The Federal Insurance Administrator gives notice of the final determinations of flood elevations for the City of Decatur, Morgan County, Alabama.

This final rule is issued in accordance with section 110 of the Flood Disaster Protection Act of 1973 (Pub. L. 93-234), 87 Stat. 980, which added section 1363 to the National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90-448), 42 U.S.C. 4001-4128, and 24 CFR 1917.4(a)). An opportunity for the community or individuals to appeal this determination to or through the community for a period of ninety (90) days has been provided. No appeals of the proposed base flood elevations were received from the community or from individuals within the community.

The Administrator has developed criteria for flood plain management in flood-prone areas in accordance with 24 CFR Part 1910.

The final base (100-year) flood elevations for selected locations are:

Source of flooding	Location	Elevation in feet, national geodetic vertical datum
Tennessee River	Just upstream U.S. Highways 31 and 72.	560
	Confluence of Flint Creek.	561
Betty Rye Branch.	Western Corporate Limits.	566
	Just downstream 2nd Street.	578
Dry Branch	Just downstream Washington Street.	561
	Just upstream Moulton Street.	564
	2nd Avenue	576
	Just downstream of 19th Avenue.	601
Flint Creek	Just upstream of State Highway 67.	562
	Southern Corporate Limits.	565
Brush Creek	Flint Road	565
	Chenault Drive	569
Clark Spring Branch.	Stanley Street	572
	Just upstream of Sandlin Road.	586

Source of flooding	Location	Elevation in feet, national geodetic vertical datum
Clark Spring Branch.	Confluence of No. 3 Tributary to Clark Spring Branch.	601
No. 3 Tributary to Clark Spring Branch.	Just downstream Danville Road.	608
	Just upstream Danville road.	610
Sheet Flow area	Intersection of Fairway Circle and Fairway Drive.	569

(National Flood Insurance Act of 1968 (Title XIII of Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 43 FR 7719.)

In accordance with Section 7(o)(4) of the Department of Housing and Urban Development Act, Section 324 of the Housing and Community Amendments of 1978, Pub. L. 95-557, 92 Stat. 2080, this rule has been granted waiver of Congressional review requirements in order to permit it to take effect on the date indicated.

Issued: February 23, 1979.

GLORIA M. JIMENEZ,
Federal Insurance Administrator.

[FR Doc. 79-8813 Filed 3-26-79; 8:45 am]

[4210-01-M]

[Docket No. FI-3474]

PART 1917—APPEALS FROM PROPOSED FLOOD ELEVATION DETERMINATIONS

Final Flood Elevation Determination for the City of Northport, Tuscaloosa County, Ala.

AGENCY: Federal Insurance Administration, HUD.

ACTION: Final rule.

SUMMARY: Final base (100-year) flood elevations are listed below for selected locations in the City of Northport, Tuscaloosa County, Ala. These base (100-year) flood elevations are the basis for the flood plain management measures that the community is required to either adopt or show evidence of being already in effect in order to qualify or remain qualified for participation in the national flood insurance program (NFIP).

EFFECTIVE DATE: The date of issuance of the flood insurance rate map (FIRM), showing base (100-year) flood elevations, for the City of Northport, Tuscaloosa County, Ala.

ADDRESS: Maps and other information showing the detailed outlines of the flood prone areas and the final elevations for the City of Northport, Tuscaloosa County, Ala. are available for review at McGuire Engineering Company, Northport, Ala.

FOR FURTHER INFORMATION CONTACT:

Mr. Richard Krimm, Assistant Administrator, Office of Flood Insurance, Room 5270, 451 Seventh Street SW., Washington, D.C. 20410, 202-755-5581 or toll-free line 800-424-8872.

SUPPLEMENTARY INFORMATION: The Federal Insurance Administrator gives notice of the final determinations of flood elevations for the City of Northport, Tuscaloosa County, Ala.

This final rule is issued in accordance with section 110 of the Flood Disaster Protection Act of 1973 (Pub. L. 93-234), 87 Stat. 980, which added section 1363 to the National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90-448), 42 U.S.C. 4001-4128, and 24 CFR 1917.4(a)). An opportunity for the community or individuals to appeal this determination to or through the community for a period of ninety (90) days has been provided, and the Administrator has resolved the appeals presented by the community.

The Administrator has developed criteria for flood plain management in flood-prone areas in accordance with 24 CFR Part 1910.

The final base (100-year) flood elevations for selected locations are:

Source of flooding	Location	Elevation in feet, national geodetic vertical datum
Black Warrior River.	Confluence of Mill Creek.	148
	Upstream of Lurleen Wallace Blvd.	152
Black Warrior Tributary #1.	Upstream of Fifth Street.	151
	Downstream of Ninth Street.	151
Mill Creek	Upstream of Fifth Street.	148
	Upstream of 37th Street	157
	Upstream of Flatwoods Road.	165
Mill Creek Tributary #1.	Upstream of 12th Street	149
	Upstream of 17th Street	160
Mill Creek Tributary #2.	Confluence with Mill Creek Tributary #1.	148
	Upstream of 17th Street	153
	Upstream of 24th Street	176
	Upstream of 33rd Street	214
Mill Creek Tributary #3.	Forty-third Avenue (extended).	162
	Downstream of U.S. Hwy. 43.	170
Mill Creek Tributary #4.	Downstream of U.S. Hwy. 43.	176
Tater Hill Creek....	Upstream of Old Columbus Road.	149
	Approx. 150 feet upstream of U.S. 82.	159
Tater Hill Creek Tributary #1.	Upstream of U.S. Hwy. 82.	160
	Upstream of 34th Street	172
Twomile Creek	Approx. 175 feet upstream of U.S. Hwy. 82.	162
	Upstream of Union Chapel Road.	205
	Downstream of Old Barness Road.	233
Twomile Creek Tributary #1.	Approx. 125 feet upstream of U.S. 82.	161
	Upstream of Alabama 69	174
Twomile Creek Tributary #2.	Upstream of Shirley Road.	205
	Approx. 100 feet upstream of Country Road 14.	232
	Upstream of Crawford Road.	268
Twomile Creek Tributary #2A.	Confluence with Twomile Creek Tributary #2.	205
	Downstream of Country Road 14.	265
Twomile Creek Tributary #3.	Confluence with Twomile Creek.	170
	Confluence of Twomile Creek Tributary #3A.	193
Twomile Creek Tributary #3A.	Upstream of Indian Lake Road.	196
Twomile Creek Tributary #4.	Upstream of Hunter Creek Road.	191
	Upstream of 43rd Street	218
Twomile Creek Tributary #5.	Upstream of Twin Oaks Road.	216
	Upstream of Union Chapel Road.	236
Twomile Creek Tributary #5A.	100 feet upstream of Confluence with Twomile Creek Tributary #5.	218

(National Flood Insurance Act of 1968 (Title XIII of Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended; (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 43 FR 7719.)

In accordance with Section 7(o)(4) of the Department of Housing and Urban Development Act, Section 324 of the Housing and Community Amendments of 1978, Pub. L. 95-557, 92 Stat. 2080, this rule has been granted waiver of Congressional review requirements in order to permit it to take effect on the date indicated.

Issued: January 31, 1979.

GLORIA M. JIMENEZ,
Federal Insurance Administrator.

[FR Doc. 79-8814 Filed 3-26-79; 8:45 am]